

## The Effective Use of Quick Response (QR) Code as a Marketing Tool

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### Abstract

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*Many marketers have been constantly debating about whether or not QR codes are beneficial to their marketing efforts. QR codes are quick and easy medium to take consumers from the physical to the virtual world, that is, bringing online content to a mobile audience in just seconds. The study through observation of past and existing QR codes marketing campaigns of companies, interviews with both marketers and consumers and review of various documents and articles uncovered six vital factors referred to as the "Five W's and H" that needs to be well considered prior to undertaking a marketing campaign using QR codes. For a QR code campaign to be successful, the study suggests a company needs to have clear objectives, know who they are targeting, provide valuable contents, place code at appropriate locations for ease of scanning, decide on the right time for the campaign and finally execute it in a creative way to stand out from the crowd.*

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**Keywords:** Quick Response (QR) Codes, Mobile Marketing, Smartphone

### 1. Introduction

According to the Cisco® Visual Networking Index Global Mobile Data Traffic Forecast for 2012 to 2017, there will be about 20 percent increase expectation of the number of mobile device users from 4.3 billion in 2012 to 5.2 billion in 2017. In the report, they also forecast the increase in mobile connections, faster mobile speeds and more mobile video. Smart phones, laptops and tablets are expected to drive 93 percent of global mobile data and companies can take advantage of this medium to increase their share of market in their respective market. Mobile devices have become an essential part of our society making it difficult to imagine functioning without it.

The study of Quick Response (QR) codes in marketing can be placed in the context of mobile technology. Mobile technology has influenced the way we interact, communicate, work and spend our leisure time. The technology is now universally accepted and used. However, it is vital for companies to understand consumer adoption behavior to this technology before any huge investment decision is made. Consumers perceive mobile marketing communications to be variously irritating (Muk, 2007), privacy invasion (Windham and Orton, 2002) and intrusive (Monk et al., 2004). In view of these concerns, many researchers have proposed permission based marketing where customers have control over the messages and content they receive (Watson et al., 2013). QR codes are one technology of interest with regards to pull marketing communication.

Recently, there have been many convenient ways to add virtual information to a physical product, to provide useful content often at the time of need. Mobile tagging offers the opportunity of such an easy access by linking mobile services to physical objects. Consumers always want easy and immediate access to needed information and QR codes are now being used to make that possible. Many companies have achieved success while others have failed.

Mobile marketing can be used to build customer engagement with a brand. Despite the growing study of understanding consumers perception of mobile marketing, little research has been conducted to investigate the vital factors to consider when using QR codes in the context of mobile marketing. Marketers are still struggling effectively use QR codes for engagement. Most previous research on mobile marketing has been done on text messages or SMS (Zhang and Mao, 2008). Other forms of mobile marketing include MMS, Push Notifications, App-based, etc. Consumer acceptance of mobile marketing has been associated with a number of factors: age, buying behavior, context relevance, incentives, personalization, and value of context (Khan, 2008; Persaud and Azhar, 2012; Bauer et al., 2005; Gao et al., 2010). The aim of this research is contribute to understanding how QR codes can be effectively used in engaging with consumers. This article is organized as follows: QR codes are discussed in the first section, followed by a review of some successful QR code marketing campaigns. The necessary factors uncovered are then explained. The final section is the conclusion.

## 2. What are QR Codes?

With the intention of developing symbols with enlarged capacity and reduced size, two-dimensional codes were invented as an advancement of the common one dimensional barcodes. Different approaches can be classified into composite codes, stacked codes, dot codes and matrix codes. QR codes are a variation of matrix codes. Further advancements are 3D codes with the additional dimension colour-depth and 4D codes with multi-sequential display (Langlotz & Bimber, 2007). Choosing a particular code type depends on the requirements of the application scenario. This paper will focus on QR codes, due to their technical advantages (i.e. combining positive characteristics of several code types) and degree of standardization.

QR Codes are similar to bar codes used by retailers to track inventory and price products at the point of sale. The significant difference between QR codes and bar codes is the amount of data QR codes can hold and share. QR Code contains information in both the vertical and horizontal directions, whereas a bar code contains data in one direction only. QR Code holds a considerably greater volume of information than a bar code. It is referred to as QR codes because of its ability to allow contents to be decoded at a high speed.

QR Code is a kind of 2-D (two-dimensional) symbology developed by Denso Wave and released in 1994 with the primary aim of being a symbol that is easily interpreted by scanner equipment. Copyrights of QR codes are waived by its patent holder, Denso Wave, which means they can be freely created and used for both personal and commercial use.



QR codes are matrix codes that can be read by mobile phones with integrated cameras. Some smart phones come with the application already installed, though it can also be downloaded for free from the internet and installed on PDAs, smart phones and other mobile devices. QR codes have been growing in popularity in Asia and Europe, but have been slow to be adopted in America and the rest of the world.

QR codes can prompt a mobile phone to display encoded text, go online to URLs stored in the QR code, ring a phone number, start a text message or import contact details (vcard). QR codes have features that makes it's a simple but effective marketing tool to engage with consumers. QR codes have high encoding of data, small printout size, resistance to dirt and damage, readable flexibility, structured appending and high level of creativity (Garg and Singh, 2013).

QR code is still considered a relatively new tool still gaining popularity in commercial markets thus scholarly articles of QR codes in the area of marketing are few. Significant contribution is that of Okazaki et al. (2011a; 2011b) who co-authored with other researchers and concluded in their study on the importance of increasing awareness and familiarity of QR codes and thus drive its user acceptance.

Many others have argued it is not an efficient tool for marketing (that is in increasing brand awareness, customer engagement among others) for many varying reasons. It is not in the objective of this article to debate on whether QR code is good or bad as a marketing tool but to lay the necessary factors necessary on how QR code can be well utilized to generate awareness, increase customer engagement and purchase intention.

The use of QR codes have been investigated in diverse sectors like mobile learning (Garg and Singh, 2013; Rivers, 2009), health care (Bellot et al., 2015; Aviden et al., 2015), security and authentication (Carnicer et al., 2015) and navigation (Anahid et al., 2014). Unfamiliarity of QR codes is affecting its usage and acceptance (Okazaki et al., 2011a).

### 3. QR code Marketing Campaigns – Case Studies

There are various brands/companies that have employed QR code in very strategic ways and reaping diverse benefits. Below are some of these benefits:

- I. Increased brand awareness
- II. Increase brand advocacy through word-of-mouth (WOM)/online interaction-buzz creation
- III. Increase customer engagement
- IV. Build huge customer database
- V. Increase sales
- VI. Customer retention
- VII. Less marketing cost

Brand/Company (Location)	Objective	Execution
Emart (South Korea)	Boosting its lunch time sales	In every major city in Korea Emart placed a large 3D sculpture, which, specifically between 12:00 and 13:00, projects shadows on itself in such a way that a QR code appears. Customers who scan the QR code on their smartphone got a discount coupon for immediate shopping.
Coca Cola (Spain)	Build relationship with new customers and further connect with existing customers on a much deeper level	Users were able to see calls-to-action placed on the packaging that invited consumers to scan to view content such as UEFA’s Euro 2012 videos and Coca Cola Smile World – the brand’s online community.
Volkswagen (Mexico)	To prove a point that a Volkswagen Crafter has ample space	Volkswagen decided to build a giant QR code made from crates full of lemons. Starting in the early hours of the morning, a crew set out to stack crates full of lemons into a massive wooden wall that showed a QR code. As people took noticed and scanned the QR code, a video instantly starts and it shows a Volkswagen Crafter dismantling the wall and fitting everything into its van.
Cadillac (North America)	Delivering information about its new XTS model	When users scanned the mobile bar code they were redirected to a mobile landing page where they could view videos or browse a photo gallery of the XTS model.
Kraft	Promote their range of cheeses	QR codes were placed on five different cheese products and when scanned, consumers were taken to a page that displayed a recipe using that particular cheese product
McDonalds	Drive awareness about its products nutritional and diet information	QR codes were placed on all take-away bags and cups and with a single scan, healthy-conscious consumers are presented with needed nutritional information about the food

There are various companies who have employed QR code in a very strategic way and are reaping these benefits. Above are a few examples. The examples above prove that QR codes can be implemented strategically in diverse ways and also in many business industries. The following companies are also worth mentioning; Boston Market, Brisk, Courtyard Marriot, Jamba Juice, Kenneth Cole, LA Galaxy, Toys R Us, Red Robin, Gillete and Walmart.

#### **4. Methodology**

Three different approaches were used to uncover these vital factors. Previous studies and articles (secondary data) done on QR codes from many sources like academic journals, online publications, blogs, etc were first reviewed to provide the background information needed to deeply understand the breadth and depth of QR codes applications, benefits and limitations.

After this first step, we were then equipped with the vital information and the right questions to ask to gain more in-depth insight. Interviews were held with marketers who have in the past or currently undertaking a QR code marketing campaign. This was a major criterion for selecting who to interview for this study. Some were done on the phone due to their tight schedule to set up a face-to-face meeting. Their knowledge and opinions helped to clearly understand their perception of QR codes. In total, did ten in-depth interviews; seven face-to-face and three telephone interviews.

Finally, to have a complete understanding of QR codes from all perspectives, random selection of consumers were also asked a few open end questions to understand their awareness and perceptions of QR codes. Consumers included both male and female, ranged from different age groups (18 and over), employment status and nationalities. Example of questions asked were: Have you heard of QR codes? Have you scanned QR codes before? Where was the QR code located? Why did you scan the QR codes? What do you expect to receive after scanning? They were at the end asked for any additional information or opinion about QR codes they would like to share.

Mostly all respondents have heard of QR codes and 95% have scanned a QR code at least once before. Most used QR codes to access discount vouchers and access information about a product on mobile websites. QR codes that were mostly scanned are located in magazines and outdoor posters. Some were disappointed after scanning because the information at the landing page was not valuable. This has resulted as a barrier for accessing a QR code in the future.

##### **4.1. Important Factors to Consider**

There are many factors marketers need to consider when they decide to undertake a QR code marketing campaign. Through observation, interviews with both marketers and consumers, the authors uncovered six vital factors and referred to them as the “Five Ws and H” of Effectively Implementing QR Codes. They are Who, What, Why, When, Where and How.

###### **4.1.1.WHY? Objective**

Brands or companies seeking to implement a QR code campaign should first clearly define the goals and objectives. Why has the company decided to use this technology? Is the company just trying to keep up with trend to portray a “technological innovative impression” to both consumers and competitors? Or it has a well defined objective like to boost lunch time sales (“The Sunny Sale” of Emart Sundial) that could be achieved by using QR code.

Setting a clear objective will aid guide the campaign development and effectively design creative use of QR codes.

###### **4.1.2.WHO? Consumer**

Consumers are end-users of goods and services and understanding their behavior concerning perceptions and judgments that underlies their decision making is vital. Consumers’ behaviors vary depending on factors such as demographics, technology literacy and experience level. QR code is a product of technological advancement and will be well received among consumers who are more inclined to technology, and often surf the web especially using their smart phones.

A company needs to know the demographics and psychographics of their market prior to undertaking any marketing activities. This is even more important when using a tool like the QR code. Companies/brands with a higher proportion of young people are highly likely to succeed with QR code campaigns. QR codes have the image of youthfulness and the young generation (especially generation Y) is reported to have a high reliance on technology and it has become a major core part of their lives.

Nevertheless, there exist a small percentage of the older generation population who are tech-savvy, open minded to diversity and can be found on Facebook, Twitter, LinkedIn like their younger counterparts.

Also since QR code is a form of mobile marketing (where data is transformed instantly from print to a user's smart phone), a potential user needs his/her smart phone equipped with scanning application (app) to perform this task. The younger generation dominates in this context as well, that is they are more addicted to their smart phones. They are always connected to the internet using their smart phones and presumably more than 50% have posted a selfie to social media sites. This phone addiction character makes mobile marketing (QR codes) an effective way to engage with them.

#### **4.1.3.WHAT? Content**

QR codes are mainly use as a link to online content when they are scanned by consumers. Consumers want to know more about the products they purchase and this can be achieved through QR codes. However, these digital supplements of information should be relevant. It should provide added value to the consumer.

Inadequate content is likely the missing ingredient in most QR code campaigns. It is utmost importance for the brand/company to provide consumers with contents that is of value to them. When consumers are satisfied with the content (good experience), re-scanning QR codes in the future is highly possible. QR codes are particularly prevalent on advertising materials for several purposes ranging from providing voucher codes for money in supermarkets to connecting to further information on all sorts of products via the web (Walsh, 2009).

Technology Acceptance Model (TAM) proposes that users' decision to use a technology depends on two factors: perceived ease of use and perceived usefulness (Hamid, 2008). QR code is easy to create and encoded data can be easily decoded by scanning the barcode with a mobile device that is equipped with a camera and QR reader software. The second factor-perceived usefulness is what consumers are not getting from most of these QR code campaigns.

Consumers want something of value when they scan a code. Remember - don't just send them to your company website, or non-optimized mobile page. Ensure that after users scan the QR code, the landing page is optimized for mobile and delivers a high-value experience to the consumer.

Poorly aligned consumer-brand expectations for mobile barcode-linked content and inadequate user experiences are driving consumers away from mobile barcode use.

#### **4.1.4.WHERE? Location/Placement**

QR codes are continually growing in popularity and constantly being used in more creative and interesting ways. Marketers are placing QR codes on almost everything – billboards, packages, print ads, on shelves, bus shelters, movie tickets, magazines, on t-shirts, business cards, on skin (tattoo), in museums, libraries, restaurants, etc. Many are of the notion to place QR code in many areas as possible to generate more scanning of the QR code.

Many companies are placing their QR codes at very appropriate and advantageous places while others are getting it wrong. The product or service involved plays a vital role in where you want to place your QR code. Best Buy places QR codes on their price tags in their stores where consumers can scan them and it will take them to a specification page online. McDonald's wrappers have QR codes on them, where the code can be scanned for ingredients or nutritional contents. The McDonalds example shows how the placement is really important. Imagine if McDonalds should place such a QR code on a billboard somewhere in a public park, what good or value will it bring to someone who is in the park at that particular time.

Ideally the QR code should be placed in a spot that complements the action triggered by the QR code. The code should also be in locations that will be easy to scan. I came across QR codes placed on moving targets and highway billboards and was wondering how such a code can be scanned. A difficult place to scan will discourage consumers from scanning your QR code. It should also be in locations with internet access coverage. Importantly, the code should be place in a location for consumers to take a moment to scan.

#### **4.1.5.WHEN? Business Plan/Strategy**

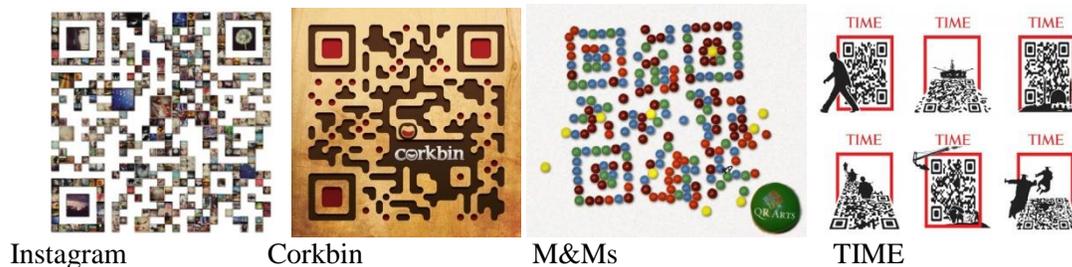
Knowing when to undertake a QR code campaign needs to be carefully researched into and well thought out by marketers. A QR code marketing campaign can be solely done on its own or integrated with other traditional media. Deciding to opt for a QR code campaign will differ from one company's strategy to the other. Is it to aid in market growth or product growth?

QR codes can be used when targeting new geographic markets or new customer segments (market development strategies). It can also be used when competing for market share growth by engaging more with consumers and creating added value (market penetration strategies). Furthermore, it can also be used to assist with product development strategies.

#### 4.1.6.HOW? Execution of QR Codes

Emphasis should be placed on creativity when executing a QR code campaign. Creativity is really vital in designing the QR code. QR codes themselves can be boring – nothing special to look at: black and white squares. A more good looking code could be the difference between someone scanning your code or not. It is important to make your QR code stand out from the crowd.

There exist a lot of brilliant designs created for companies of all sizes and markets. Such designs draw more attention than the standard black dots on a white background.



Source: Elliot, 2011 (<http://mashable.com/2011/07/23/creative-qr-codes/>)

## 5. Summary

QR Code is still a growing marketing tool that has not been fully accepted among marketers but with the right strategy it can increase a product's awareness and also drive the engagement between a company and its consumers. It can also assist in building customer database aiding customer relationship management (CRM). Lack of awareness and how to scan knowledge (application software) are limiting the benefits of QR codes. These findings echo the findings of Okazaki et al. (2011a; 2011b) and Watson et al. (2013).

Perceived benefits or value after scanning a QR code is a huge driver for continuous use. The value of information or contents is of utmost importance to the consumer. The insights uncovered by this study shows for companies to effectively utilize QR codes as a marketing tool, they first need to set clear goals, decide if this is the appropriate medium to reach their target market, whether the content provided after a scan is valuable to the consumer, is the placement of the QR code easy to scan, is it the right time to implement such a campaign and finally how will the execution be done.

Further research should be done to ascertain how effective QR codes are by performing a comparative analysis comparing it to other existing and often used marketing tools.

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