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QR code as an advertising tool

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THESIS

ABSTRACT

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In the modern world people have a lot of new digital technologies which are trying to make our life simpler. Nowadays these technologies are successfully used in different kinds of advertising, digital media and marketing. One of this technologies is the QR code. Lots of companies, organisations or also government institutions are searching for new ways to communicate with the customer or just provide new services.

In this work we are going to talk about the invention, history and using areas of the QR code. In addition, the thesis includes a survey about popularity, usability and convenience of it. Also, services they provide, how successful it works and which problems it has and what kind of opportunities this technology will have in future.

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1. Introduction

The industrial revolution was the real catalyst for the emergence of mass markets, as it is understood today: the urbanization meant that people could no longer subsist or rely upon simple barter, they had paid jobs so began to deal in cash rather than in kind. Various providers of goods and services found themselves in competitions with each other for the money in their potential customers' pockets, and so they had to begin to differentiate their goods and services within the grooving market place. With the development of mass- appeal brands the usage of new mass media to communicate brand messages soon followed. Newspapers and magazines carried more ads, now with pictures added. Posters, one of the earliest and most effective forms of simple communication, continue to reach millions of views today, as they have done since 19th century.

(Catchy Ace, Successful marketing communications, 2001 p. 11)

In the 21st century Social media plays a very important part in people's life. For this reason it is becoming more important for different companies to create new ways to be in touch with their customers. With the technological evolution huge amount of people can use different kind of electronic devices which provide internet access and can be used to look up for new information sources. The QR code is one of that technologies which can provide quick access to different sources or additional information about products or services and needs very small place. That is why it is becoming more and more popular by different companies. In this thesis, we will explain how this digital tool works, study the prevalent examples of its usage, highlight the most interesting findings of our research into the QR code - infiltrated/ -colonized markets.

The objective of this thesis are as follows:

To tell some historical information about the QR code

To assess advantages and disadvantages

To identify the using areas

To find out how popular the product is both with the marketers and the audience

To evaluate Consumer Value Perception and Cultural Openness to Innovation

To register our conclusions and recommendation to marketers, businesses communications agencies.

2. History

2.1 Invention

QR code or «quick response» is by no means a new thing nowadays. Moreover, on a daily basis, people see increasingly more of these "strange" codes in the streets, print media, handout materials and urban infrastructure, even on food. Few of us know where these signs came from and who were theirs original creators.

One has surely begun to notice some strange square boxes appearing in print publications and ads. These 2D matrix barcodes are called QR codes, or Quick Response Codes. QR codes are similar to the typical bar codes that have featured on all types of consumer products from bubble- gum till cars over the past 50 years, but QR codes can contain much more information than traditional barcodes. According to research/ industry reports, QR codes seem to have been widely used in Asia and Europe than in the US in recent years.

2.2 Definition

It is correct to think of a QR code as a paper-based (offline) hyperlink that connects the physical world's symbol with its online world's explication. For marketers, QR codes allow advertisements, brochures, posters - even clothing or billboards – to direct users to mobile landing pages that contain much more information and interactivity than can be afforded on the printed page. This integration between print and the abundance of the web via mobile adds that special, definitive new dimension of communication to any marketing or outreach effort and which epitomizes QR technology.

What purpose does the QR code serve?
An increasing number of QR code- based communications initiatives are being trialed in the U.S.A. by actors and agents who are looking to capitalize on the escalating level of handset sophistication and customer electronic devises apps adoption in the market. QR codes and 2D codes have been used by companies as diverse as Ford, Starbucks, Best Buy, Nike, McDonald's, Heineken, Calvin Klein, Ralph Lauren, The Weather Channel and among an escalating amount of other companies as buzz and visibility growing in the market area.

Specifically, from a program design standpoint, QR codes have been leveraged by brands for a variety of applications, including:

- Providing electronic coupons to customers to drive conversion, loyalty or repeat purchase.

- Quick deliver consideration- and loyalty- building information multimedia on goods, services straight to customers' electronic devises for ongoing usage.

- Allowing ticketing and timely ticket processing.

- Giving a feeling of specialty to selected target customers as can be done via direct mail campaigns with QR codes leading to individualized Links.

- Arranging for turnkey contest admission.

- Directing consumers from offline sources to mobile web pages for a special call-to-action that involves information capture.

- Transacting e- commerce by sending customers to specific m-commerce sites for on the move impulse transactions.

(QR Codes: A Point of View, 2010)

2.3 The History of QR codes

«QR (Quick Response) Codes have been in use for approximately 20 years. They were first developed in Japan in 1994 by Denso Wave –Toyota's parent company – to track automobile parts during the assembly process, and their aim was to accelerate inventory management efforts.

Recent years

In the past several years QR codes have experienced a spike in popularity, and now it is possible to find QR codes in use ubiquitously, in print media, on business cards, at ticketing booths (inside airports, train stations bus stops and underground), emblazoned on packaging, on posters and public service announcements.

A peep into the know-how

A QR code is essentially an improved version of a barcode, however, it can hold approximately 350 times the amount of data contained in a typical one-dimensional barcode. As QR codes can store information in two directions, they are thought of a matrix type or 2D code. It is likely the code will reach worldwide everyday use

over the next few years. The summary below allows a glimpse of the timeline of the code's development.

Timeline:

1952 – Joseph Woodland and Bernard Silver have patented the first barcode-type tool. Although, this was originally for a round barcode which rarely saw any form.

1966 – The barcode registers its first commercial use, however, shortage of industry standards triggered problems.

1970 – The invention of The Universal Grocery Products Identification Code (or UGPIC) to standardize the industry. For retail commerce the Monarch Marking company produces the first bar code scanning equipment.

1973 – Few years later, the UGPIC was changed with the UPC code which the consumer society elects to depend on in most of its transactions for the next 50 years

1974 – The first UPC scanner has been used in a convenience store in Ohio.

1981 – The US Department of Defense use this codes to categorize all units made for the army.

1986 – Huge amount of companies like FedEx start using the barcode and readers to trace parcels.

1988 – The first 2D barcode has developed in Intermec Corporation.

1994 – The QR code is unveiled by the Denso Wave company to monitor the vehicle production process.

2000 – The first Ericsson smartphone, the R380. At that time, it has possessed much more limited functionalities than the modern smartphones.

2001 – Palm released its first web-connectivity-capable phone.

2010 – In the United States the first reader applications for QR codes are launched for a huge number of smartphones.

2011 – QR codes begin to gain prominence in the largest OSCD, the US, thanks to such large campaigns as Macy's and Best Buy's.

(The History of QR Codes, 2011)

And for QR codes it is really just beginning. What is clear is that the QR technology is becoming increasingly more prominent with each passing year, because of that they could become key to successful marketing campaign for many businesses in

the whole world. Now it is the time to stake a claim as a QR code marketer before competition gets its chance.

Effectiveness and popularity

There are a number of benefits in using QR codes. As a user you get instant access to more information about a product, service or initiative directly from your handheld device. One does not have to type anything into a mobile phone, just by using the camera and scanning the QR code the user gets all the information, which is stored there, available for viewing or downloading via the mobile phone.

The user can keep a digital archive of this information in the phone thus the information can be consulted at any later time. As for QR code publishers, a great advantage is that one can provide more information to the user, and one can keep this information up to date. Say, for example, that you want to launch a campaign where you provide daily discounts and offers depending on the quantity of engaged customers. Using a QR code in your print advertising you are free to link users to a web site that is updated daily, based on the number of individuals who scan the code and visit the campaign web site. As a publisher, you can access more insights into how well your printed ad campaign is doing through versatile analytical data. You can count the number of users and analyze their conduct when they visit your site. Since the QR technology is freely available, anyone can create a QR code and post it in any media of their choice.

(What are QR codes and what are the benefits, 2013)

3. The Know How

3. 1 Technical explanation of functions

How does this technology work? A QR code just scans the picture with a smartphone or tablet which has a camera and a special reader application. Many of these programs can be free downloaded onto popular mobile devises platforms such as Android, iPhone, Windows Phone and Blackberry via their respective online stores like AppStore and Google Play. Once the QR code is scanned with the device's camera, it is directed into actionable information, like mobile sites or a text message.
(QR Codes Marketing: A Unique Way to Bridge Offline and Online Media, 2010)

In contrast to traditional barcodes, which are one- dimensional in nature (barcode scanners only scan the horizontal white space between the vertical stripes to extract embedded data, usually representing a unique European Article Number used for inventory tracking), QR codes contain information in both axis: the horizontal and the vertical. Compared to one dimensional barcodes, this allows for much larger amounts of raw data to be embedded.
("QR code — A Point of View" by BBDO)

Additionally, QR codes are 360-degree-reader capable and can be read in any direction. This is possible by position- detection patterns located at the three corners of the symbol, which help guarantee stable high-speed QR code's reading. QR codes also employ data correction capability, which allows data to be restored even if the symbol is partially dirty or damaged.

A few things about the engineering and software, aspects of the technology:
The smallest QR code has the size of 21×21 pixels (without margin), the biggest - 177×177 pixels.

There are five main types of QR codes, as you can see in Figure 1:

QR Code Model 1and Model 2	Micro QR Code	iQR Code	SQRC	Frame QR
[Feature] Model 1 is the original QR Code. The largest version of this code is 14 (73 x 73 modules), which is capable of storing up to 1,167 numerals. Model 2 is an improvement on Model 1 with the largest version being 40 (177 x 177 modules), which is capable of storing up to 7,089 numerals. Today, the term QR Code usually refers to this type.	[Feature] Only one orientation detecting pattern is required for this code, making it possible to print it in a smaller space than before. This code can be viable even if the width of its margin is 2 module-worth (QR Code requires a margin of 4 module-worth at least around it). The largest version of this code is M4 (17 x 17 modules), which can store up to 35 numerals.	[Feature] Code that can be generated with either square modules or rectangular ones. Can be printed as a turned-over code, black-and-white inversion code or dot pattern code (direct part marking). The maximum version can theoretically be 61 (422 x 422 modules), which can store about 40,000 numerals	[Feature] QR Code that has a reading restricting function. Can be used to store private information or manage a company's internal information) Its appearance is no different from the regular QR Code.	[Feature] FrameQR is a QR code with a "canvas area" that can be flexibly used. Since letters and images can be inserted inside the canvas area, FrameQR can be used for promotion, authenticity judgment, and other various uses.

Figure 1.
(Types of QR codes/ 2012)

There are also "fake- coding": coding patterns in data splitting long messages into codes. Reed Solomon code is applied to correction of mistakes with 8-bit code words. There are four levels of redundancy: 7, 15, 25 and 30% where users can add a 2-D drawing in different variations exactly in the middle of a QR code, then the error-correcting software makes your barcode available to read. Thanks to Exclusive OR or XOR gate which helps the QR scanner detect elements usually confusing for most software. XOR gate scans the area with a great deal of special masks. The coder has to work correctly with masks and negotiate options such as calculate, with spatial rules, all mistake points in a barcode and choose the most successful route to detecting the information on it. For the outdoor ads codes have to be 30x30 cm, located on a banner that is 3x6 meters large and no further than 7.2 meters away. Highest-precision optics must be used.
(QR Code in Advertising- Best Media and Restrictions on Use/ 2012)

3.2 Software and mobile applications for QR code recognition

Given the current exuberance of applications for different smartphones, tablets and phablets for QR code scanning, it is easy to supply a potential civilian user, marketer or manufacturer with a detailed chart comparing the most popular apps leading the industry in the field of data transmission and recognition.

QR code reader software must be installed on the mobile phone client in order to be read at all. And while most Japanese phones today come equipped with a native QR code reader app, in the United States, code reader installations are mostly a smartphone-based phenomenon carried out by the phone owners themselves, who have to actively download the software on their own comparing to pre- installations from the factory.

Notably, Research in Motion has pre- installed QR codes on BlackBerry Messenger 5.0 and Google's mobile Android operating system supports the use by natively including a barcode scanner (ZXing and Google Goggles in Version 2.2). However, a lot of phone models are not QR code capable. The iPhone, for instance does not yet come preinstalled with a native QR code reader (although no less than 25 free or paid third-party iPhone-compatible readers are available via iTunes for download). Nokia's Symbian operating system is also provided with a barcode scanner, which is able to read.

QR code creating apps.

It is relatively easy to create a QR code. Now days there are plenty of websites to create different types of codes from primitive to complex ones. There are several free QR code generators in the marketplace like "www.goqr.me", "www.the-qrcode-generator.com" or "www.qrstuff.com".

4. Successful QR marketing

4.1 Consumer market potential

The original mantra of marketing is to "find needs and fill them." The company finds needs by listening to or interviewing customers and then prepares an appropriate solution to each need. Today, however, there are few needs that companies do not know about or address.

Trends can create new needs, such as the interest in "Down-Aging". As people get older they want to feel and look younger, and this leads to buying sports cars, having plastic surgery, and using exercise equipment. So we can distinguish between existing needs and latent needs. Smart marketers will attempt to anticipate the next need and not only confine their attention to today's need.

(Philip Kotler, Marketing Insights from A to Z 80 Concepts Every Manager Needs to Know, 2003 p.30)

Here would be befitting to highlight that any age category falls into the QR code audience as the code is capable of carrying any information on any market segment, be it a kids' toy, a home appliance or a business information products.

2013 was a great year for the mobile commerce – a lot of people have used their mobile devices to get product information, pay their bills, make a purchase, compare prices and redeem coupons.

The QR code is, for now, the leading technology for taking consumers from Offline to Online (O2O). In comparison to NFC, which saw near 250 million enabled smartphones sold in 2013 with insignificant consumer awareness, over 750 million smartphone users have actively downloaded a dedicated QR scanner app like RedLaser, i-nigma, QR Droid or ScanBuy. Despite premature posts and videos proclaiming QR codes are dead, the interest in codes as measured by Google Trends has remained high and stable on a global level over the past year. Data from ScanLife demonstrated permanent growth in scans in Western countries throughout 2013, mainly by 35-44 year-old males.

In Asia, interest around QR codes is continually growing. Mary Meeker the worker of Kleiner Perkin, on one of the annual presentations about new trends in the internet, noticed the 4-time escalation in QR code generation and scans on the China market. Imageco, a Chinese market leader in mobile coupons, reported that the amount of QR codes which are scanned in China excelled for the first time in August the amount of QR codes generated, with over 60 million codes each. Ling Dong Kuai Pai, one of the leading QR scanner applications in China, reported more than a million scans per hour at peak times. QR codes proved high popularity in Chinese retail with companies adopting codes as a part of their marketing strategies. More than all, Line, WeChat, Weibo, Sina and RenRen, the main Asian social networks, having together for over a mobile 1 billion users, added QR code scanners to their mobile apps and QR codes to their users' profiles. Facebook followed that too in October 2013.

With global partners like PayPal and MasterCard and local ones, for example Ipaymu in Indonesia in 2013 QR codes gained popularity in payments, using QR codes for authentication and identification. Microsoft started using QR codes in the console Xbox One, giving gamers a possibility to redeem codes by showing a QR code to the Kinect camera. QR technology is already built- in Passbook by Apple on iOS 7. One of the most amazingly and successful project was in QR mobile payments, it was made by college student, who in 2013 got $26,000 by waiving a QR code poster directing to his Bitcoin wallet. QR code usage will grow accordingly due to gaining in mobile payments traction in 2014.

From the hundreds of thousands of QR codes which were created in 2013, referring consumers to the business' website were the most popular uses 68%, referring to a mobile business card or downloading a vCard 8%, and directing customers to a Facebook page 6%. Many of other uses shared the other 18%, including downloading an applications, playing a video, and navigating to a location. The expectation of video and applications to increase the impulse in using QR code technology in the next few years.
(2013 QR Market Summary: Are QR Codes Dead or Alive? 2013)

Instead of many advantages, QR codes in general are just monochrome, annoying and meaningless images. Visualead's patent- pending technology addresses this challenge, demonstrating superior picture conservation with near- perfect scanning ability. In A/B tests conducted with customers in 2013, Visual QR codes proved the growing of the customer invitation by 40% to 200% comparing to typical bar codes.

QR codes stay one of the most efficient ways to direct customers from the physical world to the webpages (from offline to online). Marketers need to find new and more interesting ways to use QR codes, as offered by new book from Scott Stratten "QR Codes Kill Kittens", but all facts say, that QR code technology is not dead. Furthermore it is quite alive and leading in the United States and quickly growing in Western Europe in usage.
(US Ahead of Western Europe in QR Code Usage, 2013)

Warrant Pitney Bowes's study of QR code usage between customers found that Americans have used the technology a lot more than people in the Germany, Great Britain and France. This study where participated 1000 Europeans and 2000 Americans, customers in the United States were more likely to report that they have scanned QR codes across the average by which the QR codes were delivered.

On every medium, young people across each country were more likely to have an experience of scanning a QR code in a magazine, at 27%. These customers prefer to scan the codes situated on printed materials like posters, mail, or packaging— 21% tried each of them. They were less likely to scan QR codes presented through digital media, for example on a webpages- 13%, in an e- mail- 9% or on TV- 7%.

For the codes located in newspapers or magazines, nearly 40% of Americans from 18 till 24 years and 36% between 25- 34 years reported that they have scanned one. In Germany, where the usage rate was the highest, 27% of 18- 24 year olds and 23% of 25- 34 year olds tried to scan QR codes in different printed media.

QR codes have not got yet a high popularity level in Europe, but they still got the considerable number of users. ComScore reported in July 2012, that there were near 5 million QR code scans in Germany, another 3.4 million in Spain and more than 3 million in the United Kingdom, which have not included the numbers of the Pitney Bowes report. The study says also that Germany led in QR code market penetration— 18,6% of smartphone users in Germany were also QR code users, it says that over a half of smartphone users still have not taken advantage of QR codes.

Different marketers realize that QR codes may still have a lot of prospects in Europe, but some sources suppose that familiarity is the key to grow the usage. Econsultancy survey from November of Australian customers found out that more than half of males and 46% of females who is familiar with the QR code technology had used one. As more smartphone owners in the United States and Europe find out about QR codes, the part of scanning will quickly increase.
(QR code usage in America and Europe study, 2013)

4.2 QR code usage in marketing and sales communications.

Marketing communications techniques are what most people think of as marketing. However, it is only a part of marketing. There are a lot of different forms of marketing communications techniques, generally clustered into different categories like advertising, public relations, personal selling, promotions and internet marketing. QR codes can be applied in all that areas of marketing like:

1. Collecting Feedbacks

For companies one of the most important things is collecting feedbacks about their products. This helps to understand the customer's satisfaction and improve the quality and usability of the product. Figure 2 shows the classic purchase funnel, connected to the Social Web through "digital word-of-mouth" (social media). This loop- from expectation to trial to rating to sharing the actual experience- is now a part of most every purchase or conversion process. Whether consumer-facing, B2B (business to business), for-profit or nonprofit, people are turning to people like

themselves for the information they need to make smart choices. These new sources of information are looked to by consumers for guidance alongside traditional media; advertising and traditional communications are still very much a part of the overall marketing mix. The result is a new vetting that is impacting- sometimes positively, sometimes negatively- the efforts of businesses and organizations to grow their markets. QR codes can make a process of collecting feedbacks easier for companies and customers just scanning codes and answering some questions. The feedback loop represents the way, where social technologies and internet publishing has connected people around business or other business activities. This new social connectivity applies between a business and its customers (B2C), between other businesses (B2B), between customers themselves (C2C), as is the case in support communities and similar social applications, and just as well between employees.
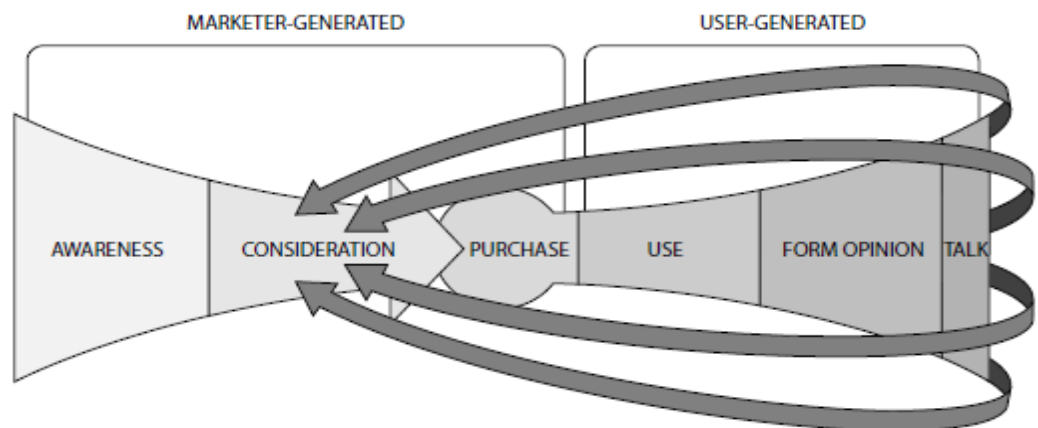
Figure 2.

Consider the following "outputs", a customer or business partner may have formed after a transaction, and will quietly walk away with unless making specific steps to give some information about product or service and feedback:

• Customer service tips that flow from users to users

• Market expansions (ideas for new product applications)

• Ideas for product or service innovation

• Public sentiment around legislative action, or lack of action

• Early warning of problems or opportunities

• Competitive threats or exposed weaknesses

• Awareness aids (testimonials)

(Dave Evans, Social media marketing, 2010)

2. A difficult or compound link

The most common way of QR code application is shortening a link to landing page, a downloadable file or smartphone app. For example, you scan a code and download a file onto your smartphone.

3. Additional info

Should an advertising carrier fail to contain all the necessary information, a QR code can solve the problem. Place the codes for a more detailed description of products and services, especially, in outdoor advertising as advertising messages will be transferred from a static place onto your smartphone. Also, QR codes can be placed in museums, on exhibitions, next to city sites / place of interest and even on public transport vehicles.

4. Customer involvement

Millions of people are scanning QR codes with the cameras on their phones each month. How can small business harness the power of this technological trend?

Putting QR Codes to Work

QR codes are being adopted by many companies in many different industries as a way to provide something extra for consumers. But you have to be thoughtful about what that something extra is going to be, according to John Varacalli, owner of three QR code entities including BeQrious.com, a website that provides news, information and technical solutions in the world of QR codes.

Varacalli says the steps for creating a purposeful QR campaign begin with direction. "The direction or purpose you have will dictate everything else that follows, so without a clear aim in mind, you will never get very far with your QR codes."

Pinpoint your purpose for getting a QR code out there. Is it to gain subscribers to a newsletter, to publicize new products or get customers to try something new on

a menu? "It is always the direction that would dictate where you take your customers to." That leads to the next step which is figuring out what the content will be.

Make It Count

"Any communication you send out should always have substantial content. You should put yourself in the shoes of your customer and find out what would be interesting to them." Content can include text, video, photos and more. And that content should have some kind of benefit.

"Always remember that your customers are driven by what they could get from you," Varacalli says. Benefits include things like discounts, deals, exclusive items and freebies.

What Next?

And remember, you want the campaign to include action. "The last thing you want to do is take your customers to Facebook or Twitter and have them connect with you and then have them ask 'So, what's next?' You should never have a dead end in your process," he said.

In the table 1 is an example of the five steps in a customer engagement program using QR codes.

D (Direction)	Want more subscribers.
C (Content)	Create a mobile site that describes your newsletter.
B (Benefit)	Tell readers that subscribing to the newsletter will give them special deals, discounts and insider information.
A (Action)	Customers sign up for the newsletter.
Be innovative every step of the way. Anyone can drive QR code traffic to a website.	

Table 1.

But Vacaralli says, that marketers will do something interesting with that technology. A fashion retailer could provide a mobile application for trying on new clothes or a car dealer may offer virtual test drives of a new cars.

QR coding is an increasing marketing tool. Small companies covering the technology should struggle to do more than just provide a link from the QR code to a webpage. Instead, plan in advance the direction the company want to head in, the content it wants to create, the advantages it will provide to consumers, the action it want them to take and the ways it can innovate each step of the process. (How to Increase Customer Engagement with QR Codes, 2012)

Voting, Polls and Surveys

Creating polls and surveys can be used in many ways in the classroom. From asking a question to see who understands, asking opinions, or generating data for a math assignment, there are many possibilities. Making the polling and surveying more accessible is easy when students can do their input by sending a text on their mobile device using Poll Everywhere.

To incorporate this into social media an easy way would be to send out the QR codes made to do the polls and have others respond to the same poll all over the place. Connecting with other classrooms and having other classrooms answering the same questions would increase the demographic of who is answering the question, as well as make students aware of answers people have from all over the place. The code below asks name and where you are from, this would be good to show where a classroom would be connecting if they were following a similar QR led lesson. Students could also create their own polls and send it out to others to answer.

5. Digital gifts

Customers can scan QR codes appearing on prepaid card displays in stores or that appear in the retailer's weekly print circular to launch the service. Giving customers a way to sell unwanted gift cards via mobile, while they are in a store, enables them to get more value and choice from the gift cards they receive without having to wait.

"Whether a consumer is exchanging a restaurant gift card, a competing retailer's gift card or a gas station gift card, they are taking the unused portion of a gift card in a

consumer's wallet and we are giving them a CVS gift card," said Dan Rogers, chief financial officer at Plastic Jungle, San Mateo, CA. He also noticed that: "If a consumer is at a CVS, they have an interest in shopping there so there is an opportunity to CVS to build a relationship with those consumers. For consumers, they may have five different cards in their wallet that may not add up to much, but when you aggregate them all together, it can add up to a significant amount of money that they can spend at CVS."

The program is being launched with Plastic Jungle, which is providing the platform and acts as a clearinghouse for card sales based on the cards' value in Plastic Jungle's marketplace. CVS did not respond to press inquiries.

6. Real-time-exchange

CVS customers will be able to sell more than 150 gift cards that have a minimum balance of $10 through the exchange. Gift cards can be sold and exchanged for a CVS gift card that can be used at any location.

Once users scan the QR code in store or from the circular, they will be able to input the information for the gift card they are selling.

Plastic Jungle then makes an offer for the card that is a certain percentage off the value. If the customer accepts the offer, they instantly receive a CVS gift card. Mobile is the future. At this point, the CVS gift cards customers purchase via the exchange cannot be redeemed from a phone. Users have to print them out first to redeem them.

"That is not the mobile experience we are all after but the reality is that the world of putting all of the gift cards on the phone is still young and there are different stages of evolution," Mr. Rogers said.

In addition to mobile access to the platform, customers can also access the gift card exchange online at cvsgiftcard.plasticjungle.com.

Plastic Jungle claims to be the largest secured gift card exchange on the Web.

"For a consumer to walk through a shopping mall and exchange their gift cards and buy discounted gift cards all happening in real time on their phone – that is the future of our business. In 2012, this is still in its infancy because redemption on a phone of a gift card is not universally available yet," he said.

(CVS rounds out mobile strategy with QR code enabled gift card exchange, 2012)

4.3 QR codes are dead, trampled by easier-to-use apps, or not?

New technology can make almost any product interactive, no download needed. QR codes are quite a new technology, but there are some opinions that they are already history. Invisible ink and augmented- reality applications are substituting the awkward codes. The new technology is more interesting because people do not have to make a photo of the code, which then remembers your contact data and sends to a webpage, document or video, or sends a text message with the link to the webpage. With the new applications, people just run their smartphones over the texts and get the improved features quickly.

Here is an example of the new technologies that will probably replace QR codes permanently.

The Japanese newspaper Tokyo Shimbu has invented the AR News application, which enables kids to scan special articles with their electronic devises to get more friendly versions of the stories, Springwise reports.

The application was developed by Dentsu, which was challenged to make newspapers attract the younger readers. Articles appropriated for kids are printed with the blue borders. Using AR News application, users who place their electronic devises over the articles will see a simplified Japanese alphabet for people who still learning to read, with animated letters and graphics, headlines and explanations that make the texts easier for customers to understand.

Blippar is a mobile application, which lets customers get offers, information, entertainment and augmented- reality 3D experiences from markers placed on products, magazines, newspapers and posters. Crunchbase says: no delays, no clicks, no codes, just instant gratification.

Another new technology is a Touchcode, it is an invisible electronic code printed on paper, film, labels or cardboard. When you take your smartphone or tablet, toys come to life, tickets sing or you can confirm the authenticity of a brand. Items made with Touchcode's invisible ink look the same from normally printed products, until customers touch them with their electronic devises.

The QR codes did have some brilliant and successful applications, like the mobile-code campaign for an independent music store in Hong Kong that sold music by allowing users to listen to and buy the tunes of 14 bands, half of which sold out their inventory. But more often, the codes were deployed poorly in spots where they could not be scanned, like billboards, or perhaps on license plates. Some QR codes require a proprietary scanner good only for that code, which few people are likely to want to download. And, while many people still have no idea what a QR code is or how to use one, instructions rarely have been included.

What are the lessons of QR for brands using the new technologies?

- Make it easy for consumers to use.
- Explain how it works, in clear, concise language.
- Employ it only when it can add something unique to the user experience.
- Make sure content or ads that contain it won't be put in places where cellphone service is unavailable.
- Make the apps available only for situations when using them makes sense.

It will be fascinating to see whether these new technologies are used both creatively and effectively. The potential is vast. Hopefully agencies won't ruin it this time around.
(QR Codes Are Dead, Trampled by Easier-to-Use Apps, 2013)

4.4 Social QR code media marketing.

QR codes mainly using in a social media and by the key of successful Marketing more then all QR codes is a new tool witch people using more and more now a days. But first of all let's begin from the basic questions as like "what is social Media Marketing" Social media is best defined in the context of the previous industrial media paradigm. Traditional media, such as television, newspapers, radio, and magazines, are one-way, static broadcast technologies. For instance, the magazine publisher is a large organization that distributes expensive content to consumers, while advertisers pay for the privilege of inserting their ads into that content. Or you are sitting down, watching your favorite sitcom, and suddenly people are

interrupted by commercials (luckily, you have a DVR, so you can fast-forward through them). If people disagree with something, they read in the newspaper, they cannot send the editorial staff instant feedback. And good connecting with their morning radio on-air personality. New web technologies have made it easy for anyone to create and most importantly distribute their own content. A blog post, tweet, or YouTube video can be produced and viewed by millions virtually for free. Advertisers do not have to pay publishers or distributors huge sums of money to embed their messages; now they can make their own interesting content, that viewers will flock to. Social media comes in many forms, but the eight most popular: blogs, microblogs (Twitter), social networks (Facebook, LinkedIn), media-sharing sites (YouTube, Flickr), social bookmarking and voting sites (Digg, Reddit), review sites (Yelp), forums, and virtual worlds (Second Life).
(Dan Zarrella, The Social media marketing book. 2009)

According to Facebook, there are nearly 500 million active Facebook users, each of whom is connected to 60 Facebook Pages, Groups, and Events on average. The popular Facebook-focused blog All Facebook keeps a running tally of the most popular Facebook Pages, ranked by the number of users who like these Pages. With a QR codes you could add as information like Page, Group or Event for one source, what will help to keep all data in the same place.
(Dan Zarrella, The Facebook marketing book. 2010)

4.5 QR code as a business tool today

What can a QR code do?
When a consumer scans a QR code the encoded data can be used to automatically access a variety of actions on the consumer's device, including: direct to a mobile website or landing page, call someone, view an e- mail, send a text message, check a special offer, download contact details (VCARD), view a google maps location, check out a social media profile.

What kinds of companies can use QR codes?

Any type of company can use QR codes in their marketing campaign. It has no matter if it is a retail business, a membership association, a nonprofit organization or educational institution, if a part of your target customers use tablets or smartphones then a QR code may be a fantastic way to differentiate a company and collect new customers in a new way.

Some examples of QR code usage.

There are plenty ways of QR codes usage in strategically combining offline and online media. Here are a few examples of it:

- A small local company prints a QR code with a link to their Google Places page with coupons and reviews.
- A social educational advertising about substance abuse ensure a QR code that links to a mobile webpage with community support resources and a profile quiz.
- A business card can contain a QR code that directs to a landing page with customer recommendations or a VCard to download holder's data.

- A home- repair product has a link to a "how- to" video with reparation instructions.
- A realtor prints a QR code on "For Sale" sign in front of a residential property, which provides additional home information, interior photos and Google Maps location.
- A retail store provides a QR code near products located in store to view product demonstrations and FAQ.
- A cafe places a QR code on a takeout menu, which links to a mobile restaurant webpage for online reservations.
- An ad for a non- profit organization has a QR code that directs to a volunteer and donation webpages.
- A seller at a conference places a QR code on their display booth so that visitors can conveniently scan and save the seller's information as they pass by.
- A promotional brochures of a movie contains a QR code with a link to a trailer video and notifications when the film premiere will be.

- A campaign sign for a political candidate contains a QR code that links to an audio file with a message from the candidate, or a mobile landing webpage with the candidate's biography, campaign platform and possibilities to contribute or volunteer.

What are some other advantages of using QR codes?

- Competitive Differentiation – QR codes are still relatively new, those who are among the first to use them in their outreach campaigns will set themselves apart as leaders in strategic marketing.

- Environmentally Friendly – QR codes can reduce waste by more efficient usage of printed materials.

- Convenience – QR codes provide a comfort one- step process for directing users to a webpage, locations, phone number, promotions or other information.

- Choice option – QR codes, as well as the landing pages they link to, can be viewed on all popular tablets or phones models and do not need special development for different platforms (for example iPhone, Android, Windows, Blackberry), as is the case with applications.

- Multilateral – codes can be applied with different types of marketing tools for just about any purpose, including printed media, outdoor ads and direct mail.

- Measurable – Campaigns with QR codes can be traced with web- analytics or other marketing tools for campaign measurement.

- Cost-Effective – QR codes cost nothing to produce, the usage of them is only limited by marketing campaign.

Key thoughts for correct usage of QR codes in marketing campaigns.

In order to use QR codes strategically in communications there are a few key considerations to keep in mind:

- Reporting and tracking – it is important to be able to track the quantity of scans over time, capture geographic and other information. A QR code tracking and reporting system can help you do this successfully.

- Context and Content - the QR code should refer the user to targeted content that adds the printed material where the code is located. Just posting a QR code at companies' webpage isn't likely to convert into action.

- Mobile Landing Page - it's a safe bet that the user who scans the code will be on a mobile device. Moreover, the company will want to guarantee that you direct customers to a mobile- friendly landing page for an optimal customers' experience. Sending customers to a webpage formatted

- Call to Action - It can also be helpful to provide some data about what customers can expect to find after scanning code.

for desktop viewing won't be helpful, and won't make a good impression.

(QR Codes for Marketing: A Unique Way to Bridge Offline and Online Media, 2010)

4.6 Different options of QR code usage in digital Marketing

QR codes are beginning to gain in popularity among the burgeoning smartphone-toting crowd – a figure that has marketers bursting with creative ideas and promotions. Still, no one wants to open their device to a glut of text messages and alerts from codes they have scanned.

Fortunately, these companies have found innovative and unique ways to not only get you to scan their code, but boost their brand awareness in the process. In the table 2 presented a few of the most memorable ones – and a few examples to get your mind stirring.

Ideal QR code usage places	Channels of QR communication
- POS, POP-materials (postcards, posters, dispensers) places of the most effective - QR code vehicles - Outdoor advertising (QR code-marketing/e-marketing/ variety of settings. - Print media (magazine, newspapers, booklets, tickets) - Business cards - Discount coupons, flyers - Direct Mail - Signage	- Adverting (product details, offers, discounts, participation in lotteries) - Marketing (voting, feedback) - Social PR/ PSAs (free useful information) - Fan (clubs) - What are QR codes used in advertising for? - Advertising capture, curiosity index - Continuous Engagement online, i.e., transfer from the offline to the online environment - Provision of detailed info on goods, services, events - Simplification of further communication: giving a clear and simple gateway to long and complicated web addresses or saving full contact details - Subscribing for an email notifications, alerts and weekly summaries - Questionnaire, capture of feedback, indirect monitoring of the efficacy of an online ad vehicle.

Table 2.

Design is a big idea, covering product design, service design, graphic design, and environmental design. Design provides a set of tools and concepts for preparing successful products and services. Yet too few managers know what design is or value it. At best, they equate design with style.

(Philip Kotler, Marketing Insights from A to Z 80 Concepts Every Manager Needs To Know, 2003 p.46)

1. Creative ads for apps

Even though, QR codes in different marketing campaigns are just starting to increase attraction, there are still businesses and individuals making their message loud and clear to early adopters. Here are two eye- catching advertisings, for Instragram and Angry Birds, both created by United Kingdom advertising company "Made by Stupid". Both QR codes direct people to download the application, and

are a great example for both advertising creativity and self- explanatory promotion of the applications themselves.

2. Greeting cards and mixtapes

There an interesting and creative thought – what if you combine greeting cards with playlists. It is a new type of mixtape and QR picture, as they called, were invented by the same United Kingdom company, which did the above- mentioned unofficial advertisings for Instagram and Angry Birds. If the consumer has the premium Spotify application on their device, they can scan the QR code and momently play the playlist. Music there satisfies nearly every interest and tastes and occasion including music for cooks, music for geeks, and everyone's favorite mixtapes.

3. Breathe new life into boring places

Polish Sukiennice Museum added a whole new dimension to their pieces of art to turn all of them into a series of stories about intrigue, insanity, deception, war and other things. This Museum also brought reenactors to tell the "Secrets behind the Paintings". Visitors may scan the code for a peculiar painting, and get the inside scoop direct from the "painter" themselves.

4. Get cheerful with personalized congratulations messages and wrapping paper

People cannot help but admire the clever ways in which marketers have attracted holiday shoppers using QR codes. Last year, JC Penney invented special "Santa Tags" which let the gift giver an opportunity to record an individual message which would be played when the receiver scanned the QR code. Customers can always wrap their gifts in a special wrapping paper printed with their custom QR- code.

5. QR codes share life in the one graphic

Funeral QR codes. These codes can be used on tombstones to check in at the funeral and note the family who was at the attendance. Currently, most of the older generation doesn't exactly know what they are, but once they are told about how the QR codes work, they were amazed.

(5 Genius Examples of QR Codes in Marketing, 2012)

Positive Example of QR code usage

When QR codes first entered on the scene a few years back, they took the marketing world by storm. Suddenly, everything had to have a QR code on it regardless of whether or not that square played a beneficial role for the consumer.

Now that the hype has faded away, however, so have some of the more extraneous and less creative uses of the technology, giving more interesting and helpful uses a chance to shine.

Here are some of the most surprising uses businesses are finding for QR codes that delight customers not only with their creativity, but also their advantages:

1. Real-Time Information – City of Frankfurt, Germany

There's nothing worse than standing at a bus stop in the freezing cold, wondering why the bus has not arrived. Is it late? How late? Has the route been cancelled for bad weather?

Mashable reports how Frankfurt, Germany, used QR codes to offer commuters an alternative to being left out in the cold. Smart posters with QR codes can take travelers to real-time information about their bus or train route.

2. Food Quality Information - Moshi Moshi

How fresh is that sushi? Great Britain-based Moshi Moshi is letting their food answer that question. They have developed edible QR codes with rice paper and squid ink, and place them directly on the sushi to share information such as food origin with shoppers.

"The idea was developed in concert with the Marine Stewardship Council," reports Fast Company," and it is all about informing and educating the public. Scanning a QR code with a smartphone will take restaurant-goers to a page of data about the fish, including which fishery it came from."

3. Creating Virtual Stores - Tesco

Why bother going to a real store if a virtual one is right in front of you? Thanks to the ingenuity of grocery company Tesco, busy Koreans now have that option during their daily commute.

"Tesco's Homeplus virtual stores in subway stations have been greatly successful and generated considerable buzz," says iMedia Connection. "Users simply scan QR codes with their phones, and the products land in an online shopping cart. When the purchase is complete the products will be delivered same-day."

4. Personalizing Gifts - JCPenney

Free gift wrapping makes gift-giving easier on the giver, but a personal voice message that arrives with the package makes the present unforgettable for the receiver.

JCPenney tested that theory with "Santa Tags," reports Mashable. The tag's QR code allowed the gift giver to record a voice message to accompany the present, making a personalized greeting a fun part of the gifting experience.

5. Marketing From Above - Phillips & Company

Perhaps the least immediately helpful to consumers, but certainly the most elaborate, Phillips & Company sells rooftop-sized QR codes to businesses who wish to connect with customers overhead.

"OK, so scanning QR codes out your airplane window might be a little unrealistic," says iMedia Connection,"but Phillips & Company's rooftop QR codes will also be visible through Google Maps and Google Earth."

The innovative and enormous QR codes run companies about $8,500 to install and include ongoing support fees, but, as iMedia Connection points out, are certainly bound to attract attention. That is what marketing is all about anyway.

QR codes may not be as pervasive as enthusiastic marketers dreamed they could have been years ago. They have, however, proven to be a powerful tool when paired with innovation and a focus on customer benefits. And a little surprise thrown in there does not hurt either.

(QR Codes: 5 Surprising Uses That Benefit Customers, 2013)

Several negative factors with adoption of QR codes

- Low levels of QR reader penetration
- Lack of consumer education and awareness
- Lack of preinstalled QR code readers

- Lack of unified 2D code standard

In particular, robust smartphone sales and application adoption as well as increasing experimentation by top brand marketers and support from industry combine for a strong union of factors that will contribute to continued adoption from a small but growing base.

Specifically experimentation with QR codes as a valid opportunity for marketers to:

- Institutionalize learnings in the 2D code space quickly for competitive advantages against late-adopter competitors
- Identify the most digitally savvy early adopters among their customer bases for continued engagement
- Create buzz as tech-savvy operators within their respective industries
- Educate their consumers around the subject of QR codes
- Optimize use of pre-existing assets (i.e. multimedia content, CRM systems, etc.)

Using a limited "test and learn" approach that will be beneficial in not exposing material risk to mainstream marketing activities while still allowing for substantial knowledge gathering and non- traditional consumer engagement.

Complimenting any in-store, outdoor or print publication-based QR code promotion with a complimentary SMS option or mobile web (self-directed) option for engagement, where applicable. Due to the low levels of QR code penetration in the US, this dual pronged approach will ensure engagement by most mobile consumers. In contrast to QR codes, SMS is a mainstream function among mobile users: 96% of US cell phones are SMS capable (CTIA) and over 1 trillion text messages were sent in the US in 2009. Additionally, 70 million consumers use the mobile web regularly (CTIA).

Leveraging the global de facto open standard, QR codes (instead of proprietary codes such as Microsoft Tags or Scanbuy's EZcode), as it is the lowest common denominator among 2D code readers in terms of inter-operability and there are inevitably extra costs associated with aligning with a proprietary code standard. Additionally, if both Google and Facebook put their collective resources behind

QR codes, which they likely will as they enter the space, it will increase the odds of such a standard taking hold in the market. At the very least, under such a scenario, all competing proprietary standards would be forced to make their readers interoperable with QR codes, which most of them already are currently. Additionally, QR codes support data tracking through the indirect method and allows embedded data to be retrieved from the code without a wireless connection (unlike several proprietary standards). Lastly, if a proprietary standard does eventually become dominant in the marketplace, there will always be opportunity for marketers to make a transition to that standard as switching costs from the QR standard to a proprietary one should remain relatively low for publishers in the near to medium term.

Before embarking on a QR code- centric campaign, marketers must understand that any QR campaign in the U.S. market at this stage in its adoption will not be effective for mass market initiatives where broad reach is a goal. Instead, it will likely only be relevant towards a small base of early adopter/ influencer audiences. However, marketers' efforts in this space will provide a value added experience for the tech savvy among their audience bases, help elevate the technology's exposure among consumers and likely spur the technology's adoption overall.

In conclusion, QR codes as a promising technology that, if adopted in earnest in the U.S. market, would provide marketers in the first economy in the world with a unique channel for bridging offline and online consumer behavior for incremental brand engagement. However, the 2D code consumer market, while highly developed in Japan, is still in its very nascent stages in America.
It will require time and continued commitment from industry to evolve. Thoughtful, cost-effective and limited experimentation for early learnings and buzz are recommended for marketers' first forays into the space.

What makes QR codes unpopular?

1) Lack of exciting content. Users are experiencing that some companies' QR codes are simply taking them to the company website or a boring ad. Often, using this call to action is inconvenient and not worth the trouble. The users want a new and exciting experience when using this technology.

2) No built in QR scanner on the iPhone. Being an extremely popular phone for young individuals, the lack of a QR code scanner adds more inconvenience for the user. If you take a picture with a regular Android camera, it opens a QR code reader app if you have one installed. Galaxy S IV and some Sony and Nokia models do have a built in scanner. In the App Store, you can find a few QR code readers, the most popular by ShopSavvy.

3) Bad locations. QR codes need to be in an area where the customer has time to go through the process. This includes bus stops, subway stops, magazines, etc. Some QR codes are in places with customers in a hurry, or have bad cell service.

Options and examples for creative digital marketing

Alternate reality experiences. These also require a downloaded app, but allows for a much richer experience. These are becoming more popular with companies that want better consumer engagement and have creative marketing schemes.

Universal Product Code (UPC). These are the standard bar codes on most items available for purchase, and can also be used for presenting information to consumers with a scanning device.

Near Field Communication (NFC). These are smartphones / similar devices that establish radio connection by touching together or close proximity.

Gee.Am. This is a creative way for people or advertisers to transfer data to their mobile devices via audio signals.

What can QR codes help with?

Shopping.

The best example of this is Tesco HomePlus in South Korea, as an online store at bus and train stations where shoppers can use QR codes in a virtual grocery store, and the items will be delivered to their homes shortly after. Macy's has also recently added QR codes on clothing signs, where when the customer scans the code, they receive tips from the designers on how to wear those clothes. Anyone can create a QR code that links to a PayPal 'Buy Now'. Another example is Walmart. Everybody know window shopping as something different to what the name expects, but, thanks to a few stores, customers can actually buy different goods through a window. Walmart created their first virtual toy store in the Christmas time in 2012, the window showed a few children's toy's printed onto a quite big screen. Each toy had a QR code on it, and when the QR code was scanned, consumer would be directed to that products page on the Walmart webpage where consumer could find a lot of information about the product and make a purchase. This was a great way for the different retailers to make more purchases, and a very cost effective way too, because they do not need to pay staff to be in the store.

Campaigns & stories.

The World Park Campaign used QR codes to create an interactive board game formatted campaign throughout New York's Central Park for the participant to view photos or read information about certain areas.

Restaurants.

QR codes can be on windows, menus, posters, etc. at food establishments. A creative use of QR codes in a restaurant is Mesob, an Ethiopian restaurant in New Jersey. Mesob has QR codes on their tables that take the user to instructional videos on how their coffee is made. You can also implement QR codes with a takeout menu.

vCards & Resumes.

Individuals can add a QR code that presents more information about their professional lives when scanned. This allows for the recipient to better engage with you on a digital media platform.

Promotions.

Users can win free items by scanning the QR code, for example Taco Bell and ESPN raised awareness with their QR code-only promotional campaign for the Bowl Championship series college football games.

Victoria's Secret "Sexier than Skin" Campaign

This is one the best examples of QR code ads in fashion industry. Sure, it has thousands of scans during this marketing campaign in 2013. In this advertising Victoria's Secret have done a great job of attracting people to scan the QR code and "Reveal Lily's Secret", to get the full picture.

When someone scan the code, he is presented with the full image, and then may to go on and buy the underwear or download other products in the line.

Music.

QR codes can allow the user to download free music. A user can also make their own QR codes for music.

Social media.

QR codes can connect to a company's social media sites. An obvious way for companies or brands to get a 'Like' & 'Follow'.

Google Maps has made some research and has found over 100 thousand companies in the United States as "Favorite Places" on Google based on Google customers' interactions with those local companies listings. Then they sent these 100 thousand companies a free window stickers with a QR code, which later scanned by a passer-by would display more information provided by Google about these company. Things like user ratings, reviews and the opportunity to star something on your own Google account for your own records, and much more. It is a fantastic idea to get people walking past your company to check it out without even coming in, people can scan the code and get a primary data about your company based on other peoples' opinions.

File transfers.

Via <u>Xsync</u>, users can transfer whole files, photos, groups of files. This app has a built-in QR code scanner to read thee codes using the phone's camera. It is currently only on the iPhone.

The hassle surrounding using these codes seems insurmountable, especially during busy schedules. On the other hand, some argue that QR codes and scanning could replace typing, which is becoming a hassle for mobile users. Some argue that anything that does not involve typing is automatically better. When QR codes are presented well and used at a time where the user can go through the scanning process, they present an opportunity for a unique advertising experience. But for now, it seems that QR codes are just another technology that is more bother than it is worth. Though scanning a couple of them now will be entertaining for a few minutes each, it is definitely not a process many people are making a habit of since most results are unsatisfactory.

These are a few of the creative ways where QR codes have been working. There are loads more, people see QR codes in art galleries and museums, located next to certain things, and when they are scanned, take consumers to a webpage filled with further information about that thing. People see them on wine bottles in shops or restaurants, so the buyers can simply make a note of any wines they like by easily scanning the bottle, they are also used on different packages to make it easier for everyone searching for more information about that product.
(Awesome Examples of QR Codes in Marketing, 2013)

4.7 Why Non-profits Should Use QR Codes to Raise Awareness

Non-profits recognize potential of QR code campaigns.
As Idealware pointed out, QR codes are a growing phenomenon. Marketers have started to utilize these codes to entice consumers in information sharing. For example, a blood drive in the area can include QR codes in posters that when scanned sends viewers to the blood drive's website, requesting for participation. Non-profits are also starting to see the potential and have used QR codes to mobilize constituents. The Big Wild, a Canadian Conservation group, for example, used QR codes for a petition drive. Together with a catchy tagline on their poster

"Do Something Small to Save Something Big", the QR code opened to a mobile-friendly petition page aimed at saving Flathead River Valley, providing an easy and simple way for people to take action for a cause. Netwits Think Tank covered more case studies of how non-profits have effectively utilized QR codes.

Five reasons why non-profits should use QR codes to raise awareness:

- QR codes are free and easy to generate: Contrary to popular belief, QR codes are not complicated to develop. Sites such as Kaywa, Delivr, and QR Stuff can create QR codes for free.

- QR codes are cost-effective: QR codes serve as an additional dissemination channel, enabling non-profits to share information across platforms at low cost.

- QR codes are creative ways to increase awareness and build engagement: In today's information overload society, non-profits can utilize QR codes' creative usage to stand out from the noise, increasing the chance of stakeholder participation.

- QR codes engage mobile audiences: With 14 million people in the USA reportedly scanning just in June 2011 alone, QR code usage is projected to increase. Non-profits can take a slice and tap a growing market with the use of QR codes.

- QR codes are effective in youth engagement: Of the 14 million people that reportedly scanned in June, half the scanners are between the ages of 18-34 with those ages 25-34 most likely to scan twice. This proves that QR codes serve as great tool for non-profits that target the younger demographic.

Once QR codes are generated, usage and participation are only limited by the imagination. For non-profits, QR codes serve as a low-cost and creative tool in raising awareness and building engagement.

5. Analysis

In this chapter we have realized a few researches to define the popularity, convenience and usability of this technology and also possibilities, prospects and future development of it. For this we used different marketing tools such as SWOT analysis (Table 3), Marketing Mix (4Ps) and Survey to collect primary data. According to our research we can get some conclusions about expediency of using this technology either in casual life or in business field.

5.1 SWOT Analysis

Strengths	Weaknesses
- Quickly connect the online and offline together by simply scanning the code with your mobile devices. - Can be used on all kinds of products. - Interaction with customers, are memorable than traditional ads. - Free and open platform, everybody can generate QR code.	- Need to have a smartphone or a tablet to use - Privacy and security
Opportunities	Threats
- Growing popularity of tablets smartphones - New markets - New products - New technologies - Online market is growing	- Substitute technologies - Change in interests

Table 3.

5.2 Marketing mix

Marketing mix describes the set of tools that management can use to influence sales. The traditional formulation is called the 4Ps— product, price, place, and promotion. From the very beginning questions were raised about the 4P formulation of the marketing mix.

Product (Customer):

Easy way for customer to collect options and attributes

Available to contact customer service

Price (Cost):

Lower prices

Possibility to get a special goods prices

Possibility to get discount coupons

Promotion (Communication):

Resource of product information in details

Initiation of consumer communication

Curiosity factor about products

Available for every mobile devices

Different variations of ADS concept

Place (Convenience):

Possibility to get a product with independents of time and place.

5.3 Survey about QR code's position on the market

Capitalizing on the conclusion drawn from the previous section we are going to unpack how popular and user-friendly QR codes have become. For realizing the whole picture we have invented this survey which as we think will give us the whole view and understanding of the popularity of QR code's usage.

Questionnaire:

1. Have you seen a QR code?

2. Your sex

3. Your age

4. Where have you seen a QR code?

5. If you have seen a QR code, have you ever use one?

6. What did you use a QR code for?

7. Would you be interested in using a QR code, either for the first time or again?

8. How do you treat to Ads with a QR code?

9. Is it convenient for you to use a QR code?

This questionnaire shows us how are QR codes convenient and popular nowadays, who are the target audience and what are the reasons of their using.

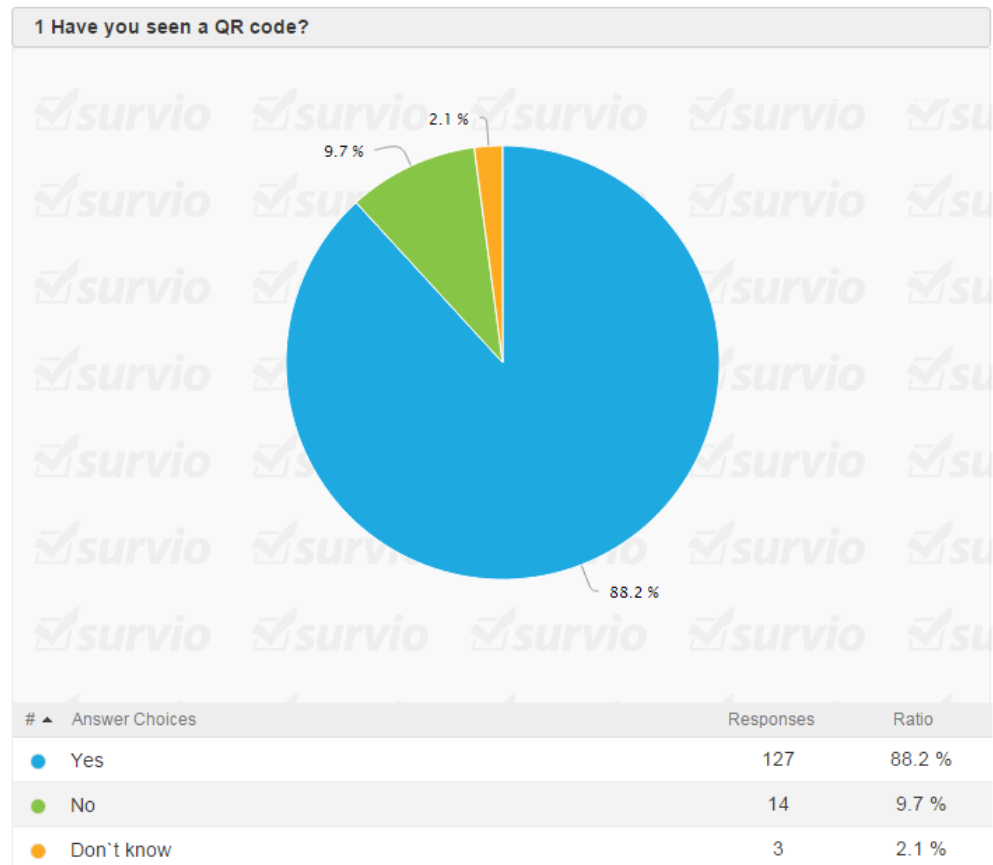| # ▲	Answer Choices	Responses	Ratio
●	Yes	127	88.2 %
●	No	14	9.7 %
●	Don`t know	3	2.1 %

Diagram 1.

On the first diagram we can surely see that the majority of respondents have seen a QR code. Diagram number 2 shows us that it was almost the same number of men and women respondents.
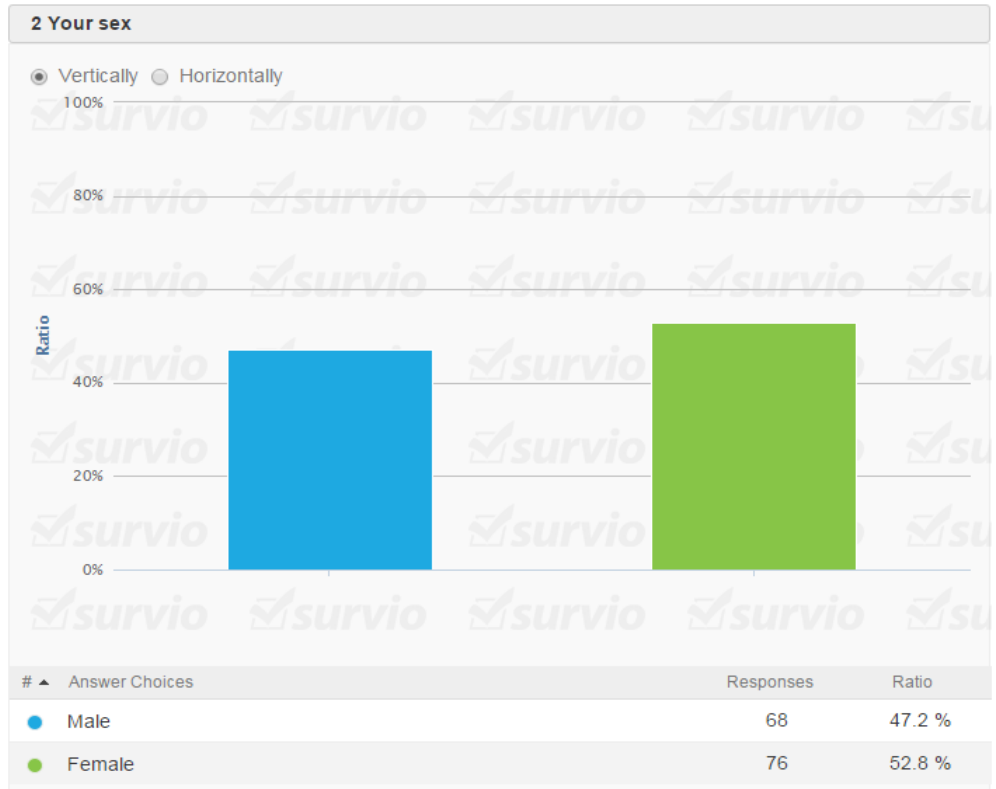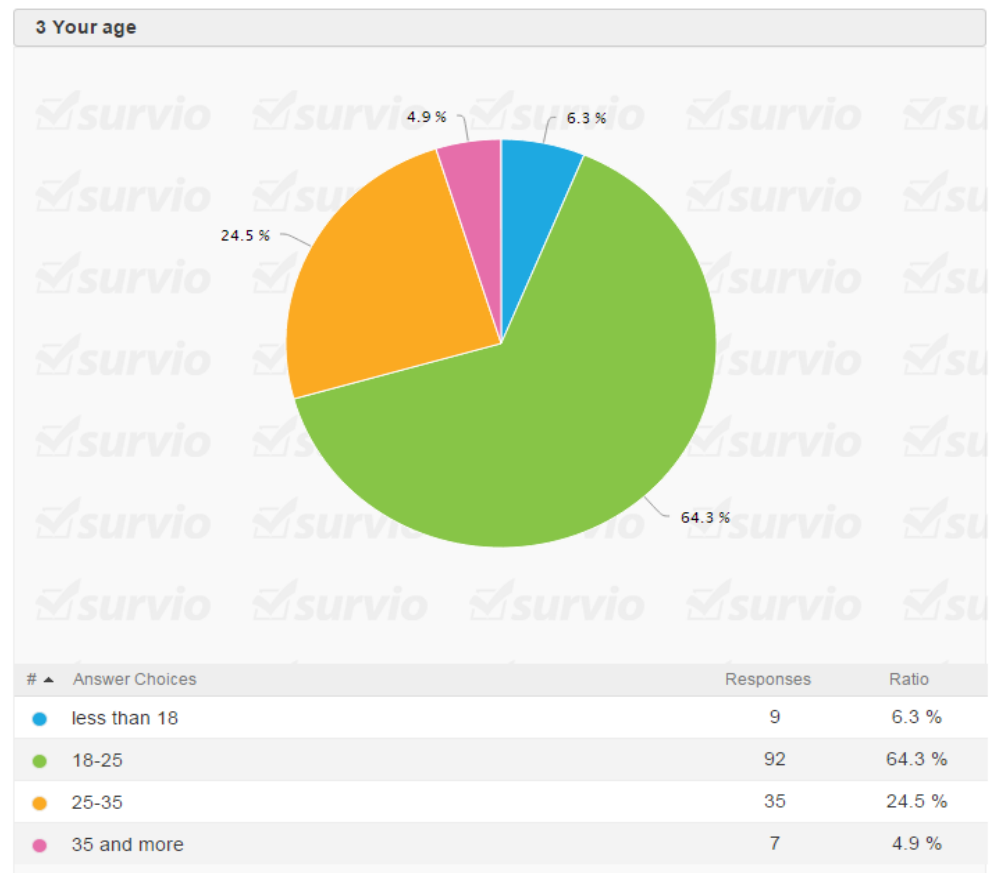
Diagram 2.

Diagram 3.

The third diagram tells us that people between 18 and 25 accounto for 65% of all respondents. People who are less than 18 and older than 35 years are less than 10%.

4 Where have you seen a QR code?

○ Vertically ● Horizontally

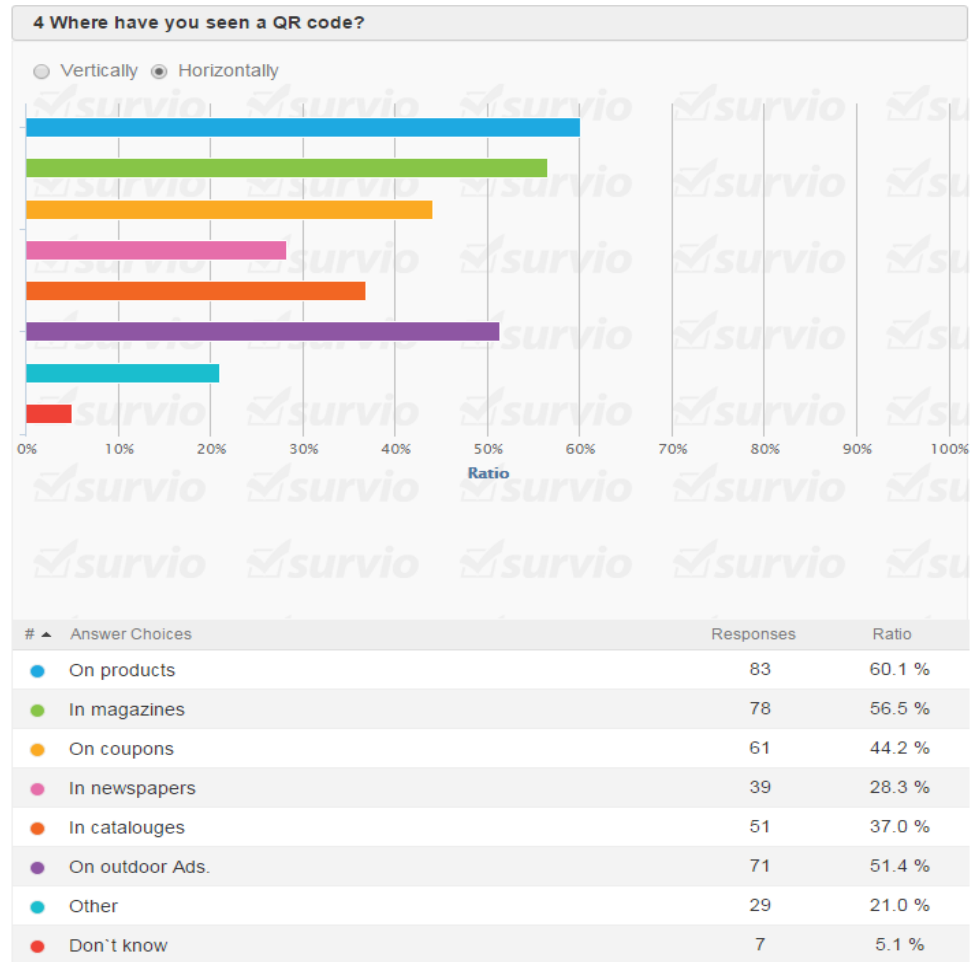| # ▲	Answer Choices	Responses	Ratio
●	On products	83	60.1 %
●	In magazines	78	56.5 %
●	On coupons	61	44.2 %
●	In newspapers	39	28.3 %
●	In catalouges	51	37.0 %
●	On outdoor Ads.	71	51.4 %
●	Other	29	21.0 %
●	Don`t know	7	5.1 %

Diagram 4.

Diagram 4 shows the most popular places where people can see a QR code. Different products, magazines and outdoor ads are the most popular areas of using.
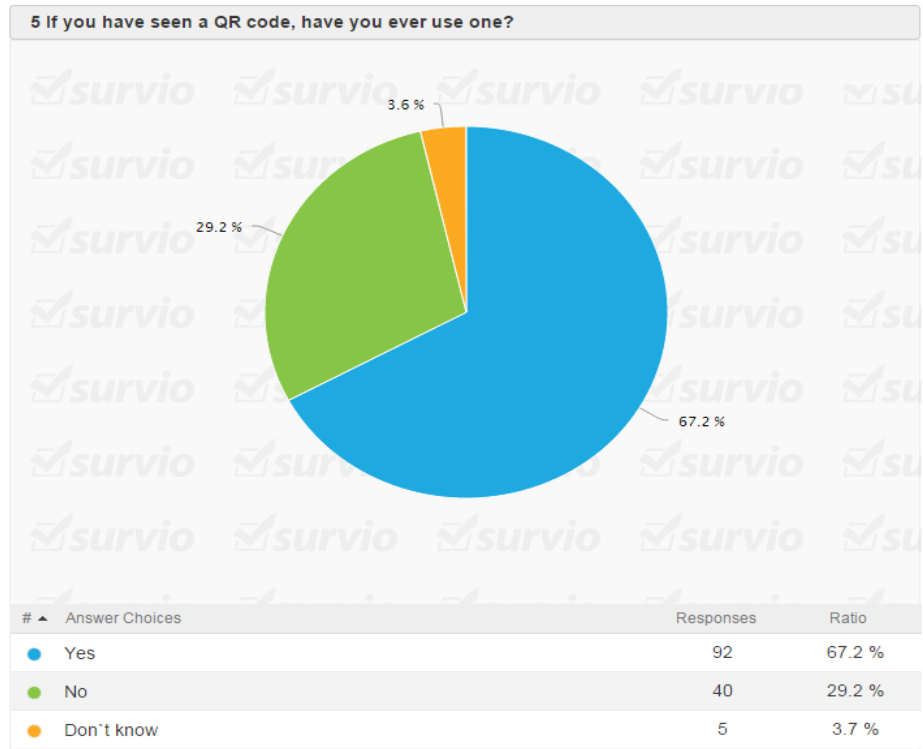
Diagram 5.

The 67% of respondents have an experience of QR code usage. That explains us that this technology is quite popular nowadays.
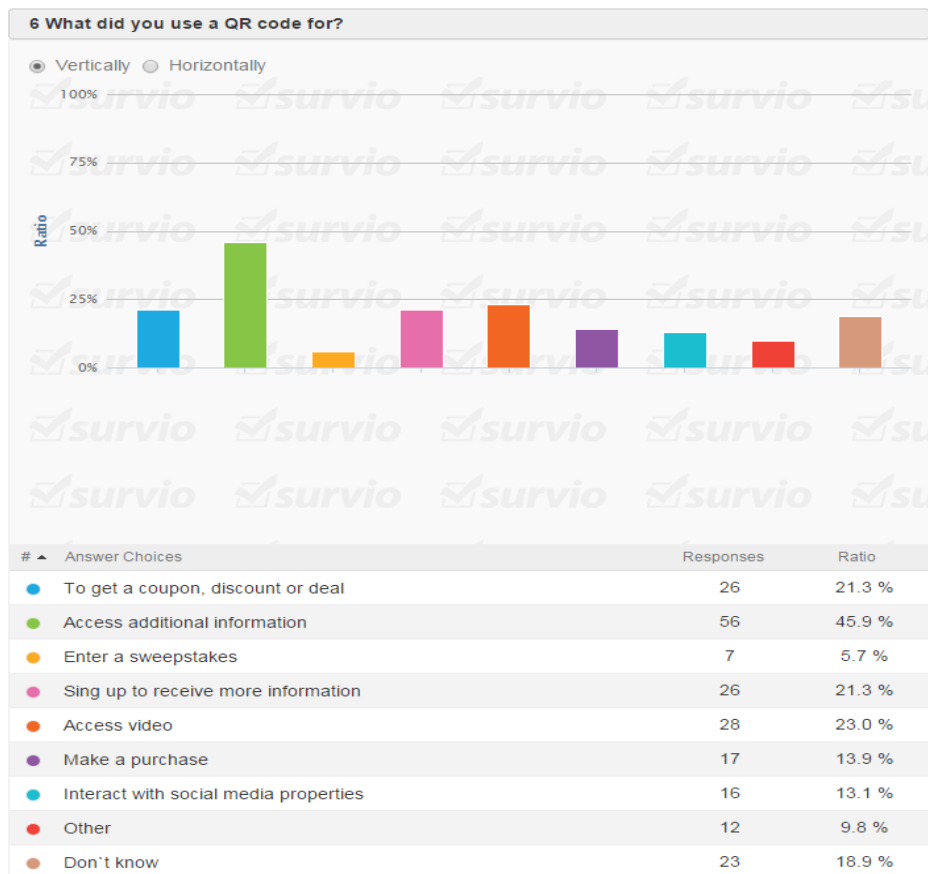

Diagram 6.

The main reason to use a QR code is to get the additional information about the product that point supports 46% of respondents. That we can see from the Diagram 6. Getting a coupon, singing up and accessing a video are the second reason of using. They all have round 20%.

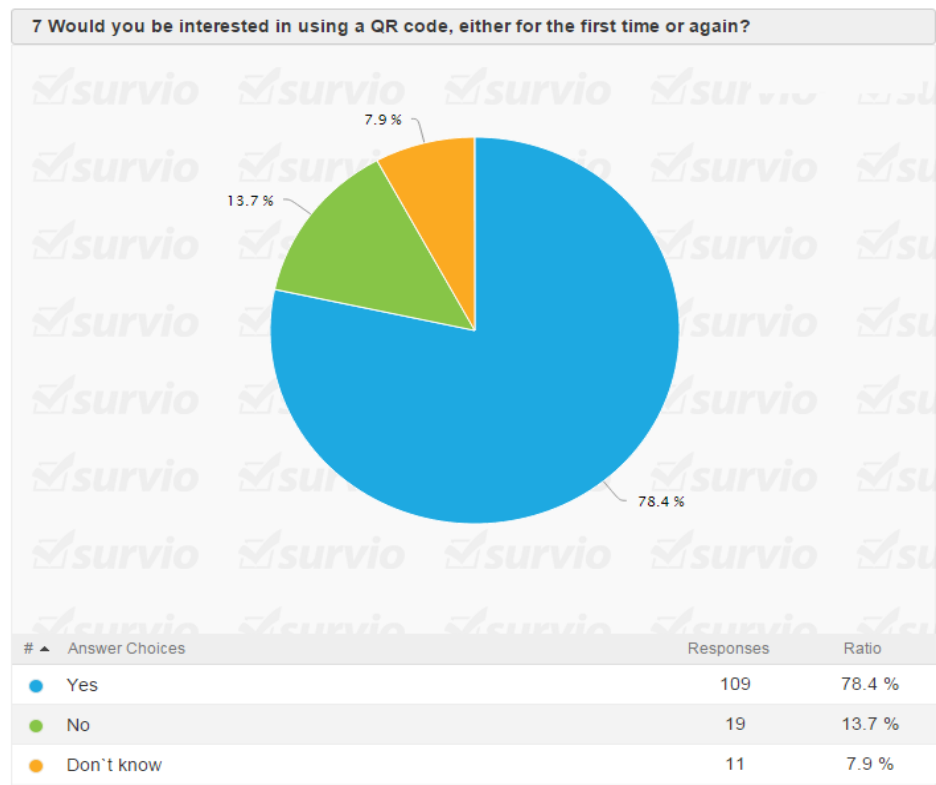Almost all of respondents are interested in using this technology again, that tells us the diagram 7.

Diagram 7.

8 How do you treat to Ads. with a QR code?

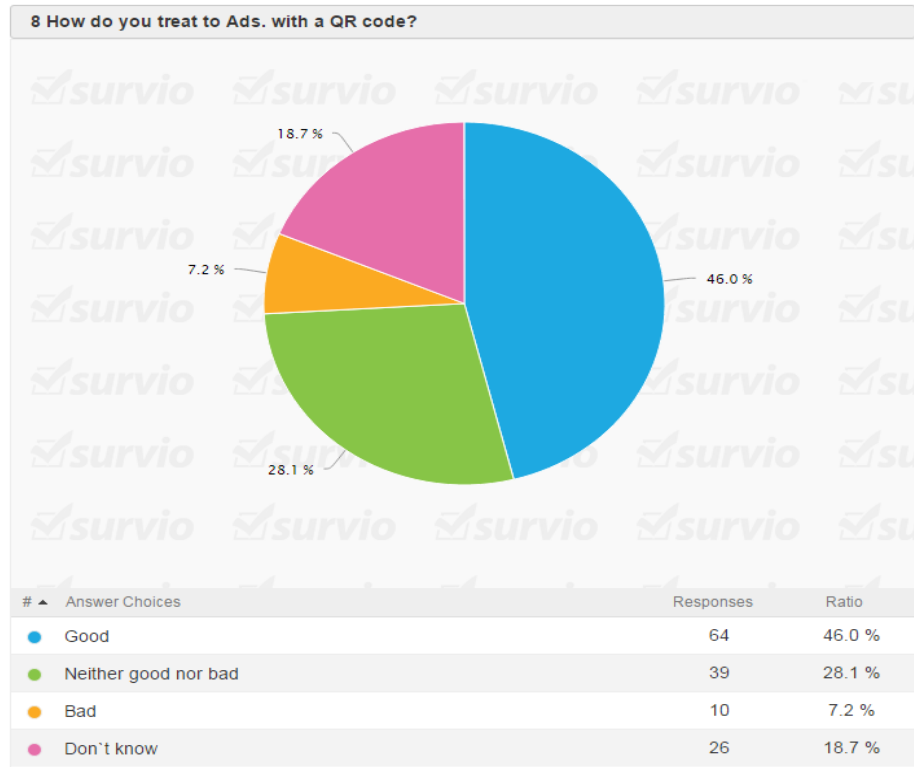| # ▲	Answer Choices	Responses	Ratio
●	Good	64	46.0 %
●	Neither good nor bad	39	28.1 %
●	Bad	10	7.2 %
●	Don`t know	26	18.7 %

Diagram 8.

Almost half of the respondents threats good to adding QR codes into ads and one third of voters it does not matter. The diagram number 9 shows us the average grade of convenience of QR code using for customer. The average grade 6,7 tells us that it is not a perfect result but we can see quite good that the majority of respondents (70,9%) gave the note from 6 to 10.
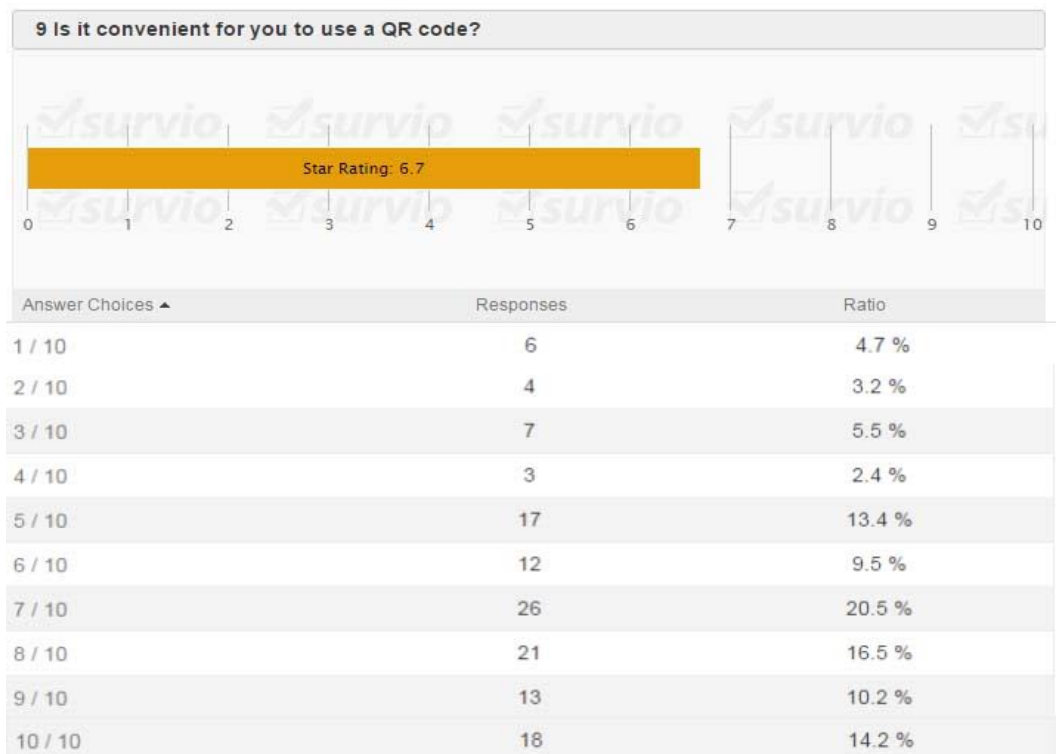
9 Is it convenient for you to use a QR code?

Star Rating: 6.7

Answer Choices ▲	Responses	Ratio
1 / 10	6	4.7 %
2 / 10	4	3.2 %
3 / 10	7	5.5 %
4 / 10	3	2.4 %
5 / 10	17	13.4 %
6 / 10	12	9.5 %
7 / 10	26	20.5 %
8 / 10	21	16.5 %
9 / 10	13	10.2 %
10 / 10	18	14.2 %

Diagram 9.

144 people took part in the survey. It was carried out from January 2014 till August 2015.

6. Conclusion

The main purpose of our thesis was the research about QR code technology: to tell how does it works, who are the main target group, reasons of invention and the methods of using. We have done the research about how the QR codes are working in the modern marketing and advertising sphere. We came to the conclusion that this technology is widely applied and it's becoming more popular every day. With the quick digital evolution a lot of people invent new ways to use the technologies like that as a marketing, design or business tool.

We believe this form of communication, its future more agile and lean descendants will lead the way in bridging the gap between the limited human perception/cognitive capacities and the ever expanding world of augmented reality and big data that is dawning/looming on us at supersonic speeds. Although, in view of the new AR capabilities, QR code may increasingly seem an anachronism, it remains, by the standards of late 2014, a leading low-tech solutions for the wide masses for the time until all mobile phones are replaced with lighter, faster, connected-at-all-times, and most importantly, cheaper smartphones or their more advanced descendants known as wearables such as the new Apple watch, Google glass and their many rivals.

Sources

Catchy Ace, Successful marketing communications 2001 p. 11

Philip Kotler, Marketing Insights from A to Z 80 Concepts Every Manager Needs to Know, 2003 p.30

Dave Evans, Social media marketing 2010.

Philip Kotler, Marketing Insights from A to Z 80 Concepts Every Manager Needs to Know, 2003 p.46

Dan Zarrella, The Social media marketing book 2009.

Dan Zarrella, The Facebook marketing book 2010.

Electronic sources

QR Codes: A Point of View https://www.scribd.com/doc/43210587/QR-Codes-A-Point-of-View (Accsessed 10.12.2014)

The History of QR Codes http://www.qrcodesinmarketing.net/history-of-qr-codes.html (Accsessed 17.06.2014)

What are QR Codes and what are the benefits http://www.businessproductivity.com/what-are-qr-codes-and-what-are-the-benefits/#sthash.7g107E3n.dpuf (Accsessed 19.06.2014)

QR Codes Marketing: A Unique Way to Bridge Offline and Online Media http://www.hswsolutions.com/services/mobile-web-development/qr-code-marketing/ (Accsessed 7.08.2014)

Types of QR- codes http://www.qrcode.com/en/codes/ (Accsessed 7.01.2015)

QR Code in Advertising- Best Media and Restrictions on Use http://brandenso.com/qr-code-in-adv-best-media-restrictions-on-use (Accsessed 11.108.2014)

2013 QR Market Summary: Are QR Codes Dead or Alive?
http://www.visualead.com/blog/2013-qr-market-summary-are-qr-codes-dead-or-alive/ (Accsessed 10.12.2014)

US Ahead of Western Europe in QR Code Usage
http://www.emarketer.com/Article/US-Ahead-of-Western-Europe-QR-Code-Usage/1009631#sthash.SCCGOslR.dpuf (Accsessed 10.11.2014)

QR- code usage in America and Europe study http://www.pitneybowes.com/us
(Accsessed 16.06.2014)

QR Codes Are Dead, Trampled by Easier-to-Use Apps
http://adage.com/article/digitalnext/qr-codes-dead-toppled-easy-apps/240548/
(Accsessed 25.01.2015)

How to Increase Customer Engagement With QR Codes
https://www.americanexpress.com/us/small-business/openforum/articles/how-to-increase-customer-engagement-with-qr-codes/ (Accsessed 6.10.2014)

CVS rounds out mobile strategy with QR-code enabled gift card exchange
http://www.mobilecommercedaily.com/cvs-rounds-out-mobile-strategy-with-qr-code-enabled-gift-card-exchange (Accsessed 5.12.2014)

QR Codes for Marketing: A Unique Way to Bridge Offline and Online Media
http://www.hswsolutions.com/services/mobile-web-development/qr-code-marketing/ (Accsessed 5.12.2014)

5 Genius Examples of QR Codes in Marketing
http://blog.kissmetrics.com/genius-qr-codes/ (Accsessed 5.12.2014)

Awesome Examples of QR Codes in Marketing
http://www.creativeguerrillamarketing.com/mobile-marketing-2/awesome-examples-of-qr-codes-in-marketing/ (Accsessed 17.08.2014)

QR Codes: 5 Surprising Uses That Benefit Customers
http://www.forbes.com/sites/capitalonespark/2013 /04/12/qr-codes-5-surprising-uses-that-benefit-customers/ (Accsessed 4.05.2014)

QR Codes for Marketing: A Unique Way to Bridge Offline and Online Media
http://www.hswsolutions.com/services/mobile-web-development/qr-code-marketing/ (Accsessed 16.06.2014)

"QR- code — A Point of View" by BBDO