

Strategies and Tools for Marketing Based on Mobile Services and Devices—An Overview

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Abstract

The selection of appropriate tools has great influence on the success of mobile marketing. Monitoring and tracking make it possible to assess the results of the use of these tools. This article will compare what tools and monitoring methods can be used in target-oriented companies on the basis of their inclusion in social media optimization. Advantages of particular tools are discussed. A comparison of properties of mobile websites and native apps regarding development cost, change cycles, speed and other characteristics is provided. The continuous improvement of the mobile marketing processes by application of the Mobile Social Media Optimization is described. In order to determine the optimization success typical Key Performance Indicators are introduced. Different technical procedures that are used in order to determine these KPIs are presented.

Keywords: mobile marketing, social media optimization, monitoring, app, mobile website, social media, marketing tools

1. Introduction

Social media has established itself in business and has been scientifically examined and described in detail (e.g. Leisenberg et al 2010; Buhse 2014). The trend towards the integrated use of social media tools for marketing, communications and other corporate functions is currently being enhanced by combining them with the possibilities of mobile devices and channels. This link between mobile and social media can be profitably used by companies in different sectors (Leisenberg 2013). To give just one example, in corporate communication it enables the utilization of context-sensitive information, for example, location-based information for the sales team, or even mobile access to corporate databases.

In the overall marketing mix, the use of mobile social media has special potential in terms of attracting customers (Smith et al 2016). This referral marketing focuses on the application of well-known social media tools (Leisenberg et al 2012) in combination with special tools for mobile marketing. The mobile, social-media tools support relationship building and communication in a mobile, social context and are based on specific principles such as self-organization, social feedback, content linking and the transparency of individuals, relationships, content and reviews. The success of such viral marketing processes can be improved by Social Media Optimization (SMO) (Leisenberg 2007). SMO has established itself as an efficient and goal-oriented approach to policies, instruments and measures which enables companies to become a more authentic part of the mobile communications' target market. The goal of optimization is to generate positive connotations (in terms of the company) amongst as many online customer contacts as possible at the lowest possible cost; this is achieved through three individual steps which are to be repeated in a continuous loop (see fig. 1.). First, it is important that the company's communication makes it a part of the target market's mobile online community. The subsequent second step aims to link operational communication and marketing strategies with specific social software applications such as native mobile apps for social networks. In the third step, the preceding optimization results are checked against the achievement of targets; responses are initiated and adapted in accordance with the results achieved and the iterative cycle returns to the beginning with modified parameters to run through the SMO loop again (Leisenberg et al 2010).

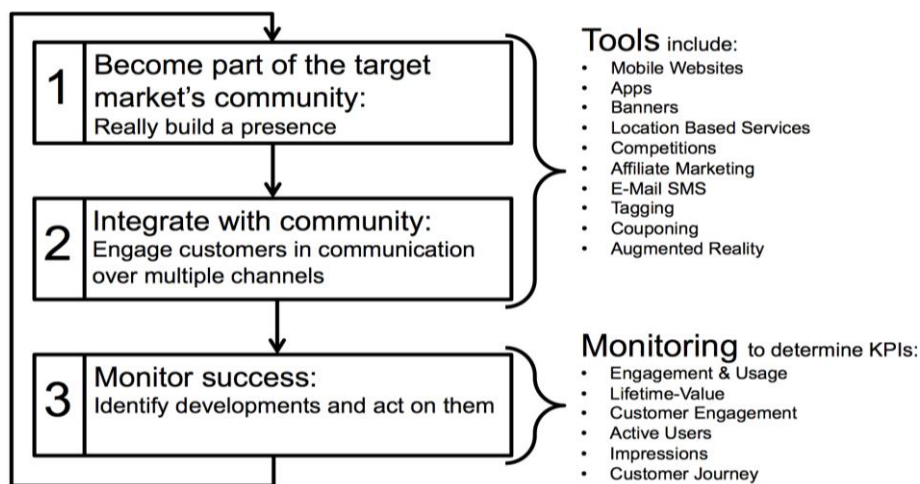


Figure 1. Social Media Optimization for mobile channels. Source: the author

Mobile social media marketing is a part of mobile marketing. In the context of mobile communication, the first two steps in SMO use the tools of mobile marketing. This article explains the most important of these tools from a real-world perspective and gives an overview of mobile monitoring which is used in the final step of the SMO-cycle.

2. Mobile Marketing Tools

The function and use of mobile marketing tools have both been the subject of selective research (Meyer 2014; Kreutzer 2012). The scientific study of important developments, such as the use of mobile augmented reality in marketing, is far from complete (Bolter et al 2013). This contribution is intended to provide a practical overview of the tools currently in use:

2.1 Mobile Websites

Mobile websites are websites which are designed around the particular characteristics of the mobile communication channel and mobile terminals, both in terms of content and in terms of the technical format. They are designed using known web design techniques and are often produced with specific content management systems, such as GoMobile, Wirenode or Pocca. Responsive design is now standard, this means that the page layout automatically adjusts to the requirements of a mobile visual user agent (Hellwig 2013). Basically, mobile sites are suitable for marketing applications. However, in consideration of the particular context of their use, it is important to ensure a clear structure, short texts and precise information. Success is dependent on whether something of value is created for the target group, such as a voucher which can be stored on the smartphone, rapid information about the opening times or a display of the way to get to a business by car. It is effective to integrate a way to initiate direct contact instantly, for example, through a phone call, mobile chat, or SMS (Payne 2016).

2.2 Native Apps and In-app Marketing

Apps are encapsulated applications, which are mainly installed on mobile devices. They are created for use under specific conditions, which include device type or type of operating system. The content and function of the app may be aimed specifically at mobile marketing. In this context "Picalook" is a very interesting app. For example, it allows the user to photograph an article of clothing which another person likes. The app then recognizes the garment and displays listings for identical and similar products. In addition, non-marketing apps can be used as carriers of marketing information. An example of this would be in-app marketing through banners which can connect via affiliate programs. The extraordinary strength of the app is that it can be customized to the specific technical characteristics of the mobile terminal, such as the availability sensors for place, temperature or even specific location and use this information to determine parameters for targeting. For beginners there are universal apps available as "white label solutions", which for example, can be tailored to the marketing needs of a specific company (Leisenberg et al 2014).

A difficult decision: app or mobile site

When choosing the right marketing tool, companies often find it difficult to decide between mobile websites and apps. As an entry point into mobile marketing the site has the advantage that it can be created for a relatively low development cost and that short change cycles are possible. A detailed examination (see. Table 1) allows for a direct comparison of the two choices.

Table 1. Properties of mobile websites and apps. Source: the author

Characteristic	Mobile Website	App
User access through	+ Browser	+ Installation and use
User interface	- Fixed navigation	+ Interactive service
Hardware sensors	- Limited use	+ Efficient use
Can be used offline	- No	+ Yes
Speed	- Limited by data rate	+ High, depends on processor
Development cost	- Low	- High
App Store offering	+ Not necessary	- Necessary
App Store checking	+ No	+ Yes

Note. + = advantage - = disadvantage

2.3 Mobile Banner Ads

Recently, in Germany, gross advertising revenues for mobile banner advertising were forecast to be about €105 million with an increase of almost 50% compared with the previous year (Schied 2013). The rate of increase will be achieved through the consistent use of specific location-based targeting. Campaigns can be supported by powerful commercial advertising networks such as red carpet. Banner advertising on mobile sites often leads to full-page prestitials which are upstream of the actual page that is to be advertised. After a certain time, or just one click the user will then be redirected automatically.

2.4 Location-based Services

Addressing target groups through Behavioural Targeting is an efficient marketing tool especially in a mobile context. Location-based services support this form of targeting and thus serve to focus the campaign on geographical areas through the awareness of locality provided by means of the mobile terminal. Selective information can be provided based on position-dependent data, for example about the local weather forecast or the location data can be used to offer value-added services, such as a recommendation for the cheapest petrol station in the area. In both cases this can involve effective interfacing with marketing information. GPS (General Positioning System) is an important technology for determining locality; this is based on the measurement of the signal propagation times using the triangle method and on the identification of the radio cell. Marketing content with a location reference is quite often utilized in shopping centres, hotels and airports (Blodget, 2012). Typical app-based campaigns include the displayed of available living spaces by Immonet or the listing of nearby garages by Pitstop.

2.5 Contests

Contests are often used for the acquisition of targeting data. They should preferably be used to generate lists of individuals who legally agree to receive mobile marketing information e.g. by SMS in the future. Important legal constraints have to be observed in this area. In the US, for example, the states have a monopoly on gambling. Therefore, contests run there should be free and only offer prizes that have no monetary value, furthermore the winner should not be determined at random. In Europe, there are also anti-spam rules and national telecommunications laws; these determine when an invitation to enter a sweepstake is to be regarded as spam (TKG 2013). In other parts of the world different rules apply.

2.6 Mobile Affiliate Marketing

In mobile marketing, mobile affiliate systems offer sales solutions, for example, banner ads. A commercial provider remunerates their channel partners according to a model by which success is judged by the fulfilment of a condition. In this context, affiliates are often individuals or small businesses, who are also operators of apps or mobile sites. In this scenario, “successfully” means that the affiliate spreads the advertiser’s marketing as widely as possible. This presupposes that they can reach the target audience efficiently through their own channels. Affiliate networks also enter into this process as intermediate suppliers. The provider provides the advertising materials (e.g. banners on mobile devices) via the affiliate network distribution partners. These then use the advertising media with their own mobile marketing tools to advertise their commercial partner’s offering. Successful remunerations models for motivating affiliates include Pay per Click, Sign Up or Install (Glockel 2012). Affiliate networks take over services for commercial providers by delivering advertising materials to the partners and at the same time provide commission detection and billing via the mobile channel. The networks can also offer additional services such as location-based or context-sensitive delivery and monitoring.

2.7 Mobile E-mail Service

First of all e-mail marketing is subject to the target group treating it as suspected spam. This would seem to restrict its usefulness considerably. However, the legislature has intervened here and it is therefore important to observe, in particular, the provisions in Section 7 of the "Law Against Unfair Competition". It is therefore necessary to obtain the explicit consent of the recipient before sending mail and newsletters, as well as making it possible to unsubscribe quickly and easily at any point. For this reason, the double-opt-in method has been adopted. This means that entry into the mailing list must be confirmed in a specific step. Mobile email marketing can be an effective means of communication. It allows companies to take a direct-sales approach and for the targeted delivery of larger blocks of contiguous marketing information. To motivate perception and interaction, the content needs to arouse the interest of the recipient and in the mobile context it should offer useful additional functions such as location-based services. It is recommended to use a responsive one-column design with large navigation buttons (Levin 2014) so that the layout adjusts automatically to the mobile channel and the terminal.

2.8 SMS Service

One of the advantages of SMS is that the target audience is accurate and immediately accessible. The mobile terminal is almost always ready to receive and within physical reach. Since 95% of all text messages are read within the first 5 seconds after receipt, they represent one of the most effective communication channels. The receiver associates SMS with something "urgent" and does not (yet) consider it as spam. The message is always displayed correctly on different devices and you don't have to be connected to the Internet to receive it. The brevity of the text often leads to recipients processing it immediately and to marketing success. App-based messenger services such as "WhatsApp" are increasingly reducing the reach of the SMS service. The use of the messenger-channel for mobile marketing would be a compensating alternative.

In use, a distinction is made between proactive SMS to potential customers and customer care SMS to existing customers. Of course, the legal requirements need to be strictly observed. The sending process can be undertaken either by sending bulk SMS or automated through integration into customer applications. With SMS campaigns, the customer is often contacted via an offline medium, e.g. flyers, and asked to send an SMS with the implicit consent to reply. In SMS marketing the feedback information can then be sent to the potential customers (Payne 2013).

2.9 Mobile Tagging

This tool uses printable 2D codes to combine the physical world with the virtual and is therefore tailor made for special tasks in marketing. The codes are designed specifically for storing small quantities of data, such as suitable web addresses and are known in various forms. Currently, the Quick Response (QR) Code and Data Matrix Code are the most popular. They are captured by the mobile terminal's camera and subsequently decoded and functionally analysed by an app. You are unlikely to achieve marketing success through the simple encoding of URLs. Innovative features are required. For example a textile company uses a QU code to encode "liking" its own fan page on Facebook (Life Labs 2013).

2.10 Mobile Couponing

Since the abolition of the German law on discount coupons, the German-speaking countries have increasingly accepted the use of coupons to increase customer loyalty and for sales promotions. Mobile couponing allows these discount coupons to be localized and personalized and for them to be transferred to customers' mobile devices for use while shopping. This is particularly interesting for stationary companies from the retail, hospitality and services industries. A distinction is made between pull and the push-couponing. Push couponing is often used in the SMS channel for sending the discount brands. The pull-variant refers to the selection of coupons in the context of the customer's mobile usage. Contextual profile information, such as location, time, age or sex can be utilized when creating the coupon offer. The reference to the location makes it possible, for example, to offer customers discount coupons for nearby branches of a supermarket chain. The app "Passbook" (Söfel 2014) is used to save the coupons. NFC (Near Field Communication), bar codes and/or QR codes can be used for the automated transfer of coupons into the business' POS system. Standardized practical solutions for this do not yet exist.

2.11 Augmented Reality

That AR-tool has high innovative potential and is only at the start of its mission. "Augmented Reality" describes the computer-aided expansion of the recipient's perception of reality. In the mobile context this refers to the superimposition of marketing information on the images which a mobile app receives in specific situations. In particularly technically-demanding applications, even moving images are automatically supplemented by additional information. There are already various, more or less ambitious examples in use. A store projects furniture from their catalogue onto a photo of the client's living space. In another example, an estate agent's app offered real-time overviews

of urban streets supplemented by information on location, properties and available apartments for rent. Augmented reality marketing applications are especially interesting when head-mounted miniature computers in the form of spectacles bring information into the field of view. The product Google Glasses is a first step in this direction (Richter 2014).

3. Mobile Monitoring

Outside of the context of the SMO, the result of the use of Mobile Marketing tools must still be subjected to a performance review by monitoring to determine the following typical Key Performance Indicators (KPI):

- Engagement & Usage,
- Lifetime Value (value of the mobile user)
- Customer loyalty,
- Active users,
- Impressions,
- Customer Journey (from first click to conversion).

Because of their specific circumstances, different technical procedures are used to determine the KPIs for mobile websites and apps.

3.1 App Monitoring

Prior to the measurement of indicators, the monitoring service’s libraries must be integrated into the app code. This will, inter alia, generate recognizable, temporary device identifiers when being called. On this basis, it is possible for there to be clear recognition of unique sessions. The measurements which build upon this, focus on the determination of customer loyalty, the navigation paths of motion profiles and profile-based usage data. Socio-demographic and location-based data can be collected only with the consent of the customer. The evaluation is carried out in a strictly depersonalized matter for legal (and other) reasons. This method allows for anonymous tracking with a high degree of accuracy in distinguishing the terminals. However, it is limited by the high degree of device fragmentation in the Android world. Typical monitoring and tracking service include 6ry (Flurry 2016) and (Localytics 2016). Fig. 2 documents a tested application scenario utilizing Flurry. In the course of an app "Quiz", 4 alternative states (Right, Wrong, Start, Stop) were marked and observed by means of the routes the test subjects followed when using the app. It can be therefore be seen to what extent the four possible states followed the state "quiz-right". Such evaluations are useful both for the success evaluation of mobile marketing campaigns as well as conclusions on the efficiency of the user guide.

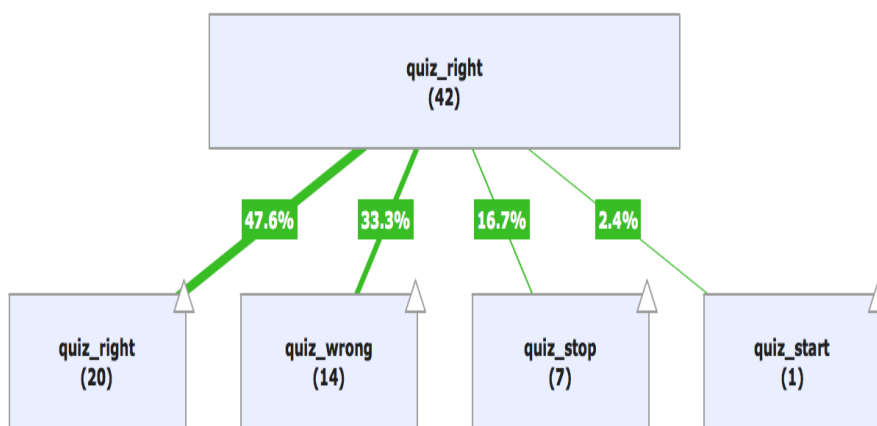


Figure 2. State graph of the use of a test-app; Source: own measurement (Flurry 2016)

3.2 Monitoring of Mobile Sites

By contrast, KPI measurement for mobile sites is often based on known technologies such as JavaScript Page Tagging, pixel tracking or cookies. Vendor specific tracking codes are also often inserted into the structural description of the site. These methods can be implemented without significant effort for the user, but can be turned off by the target group just as easily. Typical measurements focus on the relationship between commitment and usage, on the identification of page views, visits, visitors and information on the technical characteristics of the mobile terminals. Anonymous tracking is not possible, because the IP addresses of the servers are identified. It is technically unsound to use these methods for media queries, which are needed for responsive design. Analytics (Google 2016) and Webtrends (Webtrends 2016)

stand out amongst the variety of products available for this purpose.

4. Conclusion

The design, implementation and evaluation of mobile marketing are complex and interdisciplinary tasks, the solution of which can be profitable for companies. The author has tried to approach this topic through an exploration of the new opportunities and current needs of mobile social media use. The successful operational implementation of mobile social media marketing requires strategies. The author has developed the known methods of SMO for the mobile problem. Important mobile marketing tools have been presented and classified against this background. The identification and evaluation of the success of mobile marketing campaigns requires efficient and meaningful measurement and analysis, in particular from the perspective of mobile SMO. Therefore, this work concluded with the presentation of options for monitoring mobile websites and apps.

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