



Designing branded mobile apps: Fundamentals and recommendations



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Abstract The development of mobile applications has represented a challenge and opportunity for companies to market their brands and products through a new channel; however, the branded mobile applications (branded apps) currently available in the market are far from perfect and existing app designs do not yet have well-established mobile and social features. This article offers systematic guidelines for branded app design by identifying different levels of strategies that should be taken into consideration by companies. We illustrate five business objectives (communication, customer relationship management, sales, product innovation, and marketing research) and identify five types of branded apps (tool-, game-, social-, m-commerce-, and design-centric). Three functional building blocks are proposed to specify how mobile features, social features, and brand mention elements should be incorporated into branded app development. Various examples of branded apps are provided to illustrate relevant best practices in order to guide marketers in improving branded app design.

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1. Branded apps: A new paradigm

The development of mobile phone applications has become very important to companies, most of which are actively engaged in implementing mobile strategies and are developing or actively deploying portfolios of mobile phone applications. Hinchcliffe (2013) predicts that the development of mobile strategies will continue to be a major challenge and that branded

mobile applications (branded apps) will be widely adopted in the coming years. Companies have to adapt to this new culture, ensuring that the profiles and competences of marketers properly adjust to new consumer behaviors in the market.

Bellman, Potter, Treleaven-Hassard, Robinson, and Varan (2011) define the branded app as software that is downloadable to a mobile device and prominently displays a brand identity, often via the name of the app and the appearance of a brand logo or icon throughout the user experience. One reason behind the popularity of branded apps as marketing devices is that their high level of user engagement makes the advertising messages they convey highly persuasive (Calder, Malthouse, & Schaedel, 2009).

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Research has tested the actual impact of branded apps on users. Bellman et al. (2011) employed an experimental design to confirm that the use of branded apps has positive persuasive impact, increasing brand interest. Other studies have measured user adoption of and responsiveness to mobile apps. Because mobile apps focus on real-time relationships with consumers, in this context, relationship management is more consumer-instant-action-centric than conversation-centric. Therefore, a challenge faced by companies relates to how to capture user attention. A difference between mobile and web services noted by Oinas-Kukkonen and Kurkela (2003) is the usage context. People often use mobile devices in noisy and distracting environments. However, real-time contextual information, including peer-to-peer information and recommendations, generates new consumer behaviors in the market. Kourouthanassis, Georgiadis, Zamani, and Giaglis (2010) identified expected performance as a significant determinant of the acceptance of mobile marketing offers. Ho and Syu (2010) found that the main motives for and rewards from using mobile apps are entertainment, functionality, information, socialization, intellectual stimulation, following a trend, and learning. However, to date, no studies have identified the features that companies can use to develop their branded app strategies.

The goal of this article is to provide marketers with a method to develop branded app strategies that will allow them to benefit from this fast-growing trend. In section 2, we classify the business objectives of branded apps into five categories: communication, customer relationship management (CRM), sales, open innovation, and marketing research. In section 3, by analyzing and evaluating mobile apps designed by several top-100 brands, we identify five types of branded apps: tool-, game-, social-, m-commerce-, and design-centric. Various examples of branded apps are provided to illustrate the best practices associated with different types of apps and features. In section 4, we propose three functional building blocks to identify which factors should be taken into consideration in branded app design; specifically, we describe mobile features, social features, and brand mention elements and further illustrate how these features should be integrated into branded apps. In section 5, we provide recommendations to marketers and conclude the article with directions for future research.

2. Business objectives of branded apps

When brands decide to create mobile apps, they first have to define clear business goals. In this

Figure 1. Five main business objectives in branded app design



section, we introduce five business objectives of branded apps. As shown in Figure 1, these goals are communication, CRM, sales, product innovation, and marketing research. Note that individual branded apps can have more than one business objective and individual brands can design multiple mobile apps to target different products and business goals.

The first goal of branded apps is communication. This includes communicating brand values, information, and products, thereby enhancing brand image and increasing brand awareness. Most branded apps achieve this goal as one of the business objectives of app design.

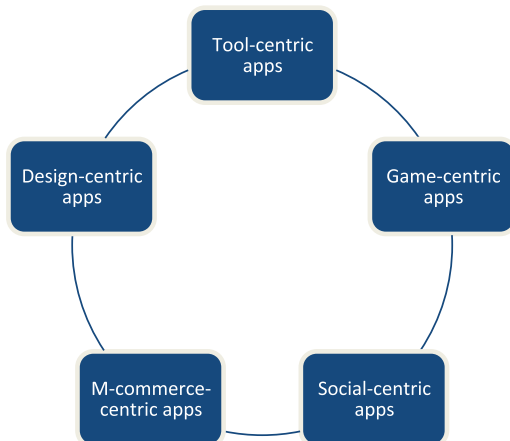
The second business goal of branded app design is CRM. Branded apps can perform well as intermediaries between brands and customers. The objective is to manage company interactions with current and future customers. This includes brand engagement with loyal customers, the collection of user data, and the generation of product recommendations to current and potential clients.

The third goal of designing branded apps is increasing sales. Branded apps aim to create completely new purchasing experiences and interaction models for users, with a whole set of capabilities including location awareness, context sensing, and product customization.

The fourth goal is product innovation. Branded apps can support open innovation by allowing users to generate new ideas for products; for example, they can build a community for the sharing and rating of ideas, with the most highly rated idea often being rewarded and adopted by the brands.

The last goal of branded app development is marketing research. Branded apps can help companies survey users in new ways. In the shampoo market, for instance, some companies have asked women to share photos taken with their mobile devices to express their opinions about good/bad hair appearance. This process provides marketers with value-added information to better understand consumer behaviors.

Figure 2. Classification of branded apps



3. Classification of branded apps

Another important strategic factor that companies should take into consideration is the type of branded app. Bellman et al. (2011) differentiate between two types of apps: informational and game-like apps. After reviewing branded apps designed by the top 100 brands,¹ we propose a classification into five dimensions that identifies branded apps as tool-, game-, social-, m-commerce-, or design-centric (Figure 2). We further illustrate each type of app using several examples.

3.1. Tool-centric apps

Most companies develop their apps as tools to provide users with utility. Tool-centric apps can be extremely diverse. The main goals of tool-centric apps are to identify the motivations and requirements of consumers in using/buying products and to develop services to assist consumers in these processes. For example, L'Oreal's The Color Genius app (Figure 3) allows users to take a photo of their outfits and identify a look as for day or night; the app then proposes an on-trend combination of make-up products that suits a user's outfits. The Colgate Dental Advisor app includes a toothbrush timer to teach recommended brushing techniques and allows users to set reminders for their next dental appointment. Heinz's Food In A Minute app provides a database of 700 recipes that can be searched by ingredients or names. Each recipe contains one or more Heinz food products as a reference for users. The Johnson & Johnson Wound Care Resource™ app provides a series of tools to make wound care easier. It allows

users to keep a diary to track the progress of their wounds, and recommends a set of wound care products based on the type, location, and condition of the wound.

From the business perspective, most tool-centric apps present their products in direct or indirect ways. The Color Genius, Food In A Minute, and Johnson & Johnson Wound Care Resource™ apps present their products as recommendations to consumers, which is regarded as indirect customer relationship management, whereas the Colgate Dental Advisor app lists the company's products with detailed classifications and descriptions, which is considered to be direct communication.

3.2. Game-centric apps

Companies primarily design game-centric apps due to their high hedonic values. For example, the Domino's Pizza Hero app provides an immersive game experience by allowing users to make top quality virtual pizzas by kneading dough, spreading sauce, sprinkling cheese, and placing toppings while racing against the clock. The Johnson & Johnson Happy Nurse app is a race game in which the user, playing the role of a nurse, must avoid all obstacles in his or her way. J&J posters appear along the nurse's path and the nurse has to use hand sanitizer at the last moment to enter the operating room. The Heinz Dip & Squeeze™ Ketchup Craze app (Figure 4) contains 10 game levels allowing players to squeeze Ketchup on different types of food, such as hot dogs or burgers. Kellogg's Apple Jacks™ Race To The Bowl Rally app allows players to create avatars using Apple Jacks mascots and then race through the frozen Ice Kingdom. Users get extra race points by collecting Apple Jacks cereal pieces and achieve hyper-speed by collecting Apple Jacks logos along the way.

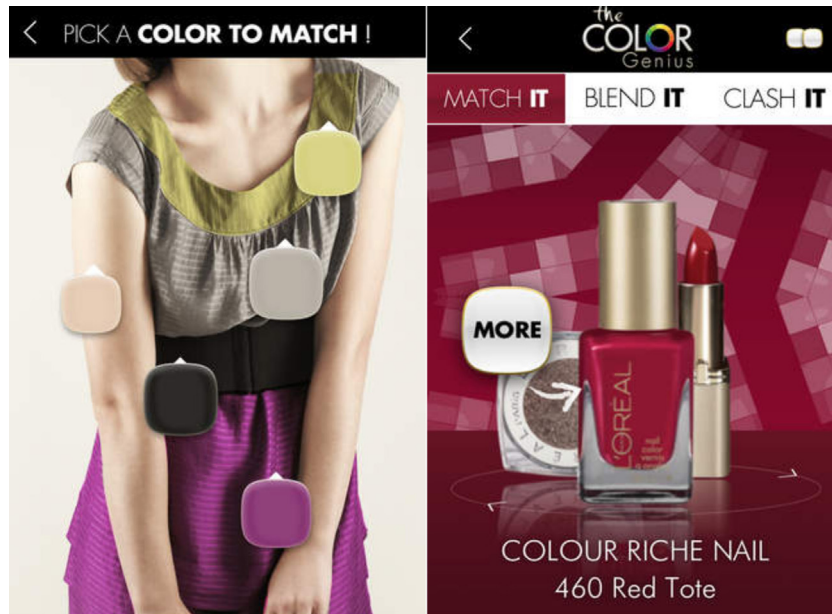
From the business perspective, most game-centric apps aim to create an immersive environment through the use of different brand elements, exposing users to good brand moments to enhance brand image and increase brand awareness. Some apps are linked to e-commerce websites and aim to execute direct sales. Moreover, companies can collect user data through game-centric apps, which is useful for customer relationship management.

3.3. Social-centric apps

Social media has become a buzzword in the web 2.0 decade. From the user perspective, social-centric apps are designed to target socializing for fun. One successful example is the UNIQLOOKS app designed by Japanese apparel retailer UNIQLO (Figure 5). This app affords customers, fans, and

¹ Chosen from the Interbrand (2013) annual report.

Figure 3. L'Oreal's The Color Genius app



visitors the opportunity to populate its global community with images of themselves wearing various combinations of UNIQLO clothes; members of UNIQLOLOOKS can then vote and comment on their styling. A global audience determines each Look Of The Week winner, and, as a reward, the look is featured on UNIQLO's Facebook page. The top-ranked photo is used to help showcase clothing in stores. The Likes spread the brand across social networks in a natural, peer-to-peer manner, while the site incorporates a strong e-commerce element by linking directly to the UNIQLO online store. As noted by [Vazquez \(2011\)](#), UNIQLOLOOKS is not only about online advertising and

user-generated content; it also seeks to engage fans and brand advocates by turning members of their community into both their models and their stylists.

Other examples of social-centric apps include the Avon Send A Kiss app, which allows users to take a picture of their lips, create personalized messages using their lip prints, and share kisses with friends and family via e-mail, Facebook, and Twitter. Similarly, Dove's Body Language Messenger app allows users to type a message, watch the Dove girls use their bodies to create each letter, and share this animated message with friends via e-mail, SMS, and social networks. These two social-centric apps focus

Figure 4. Heinz's Dip & Squeeze™ Ketchup Crazy app

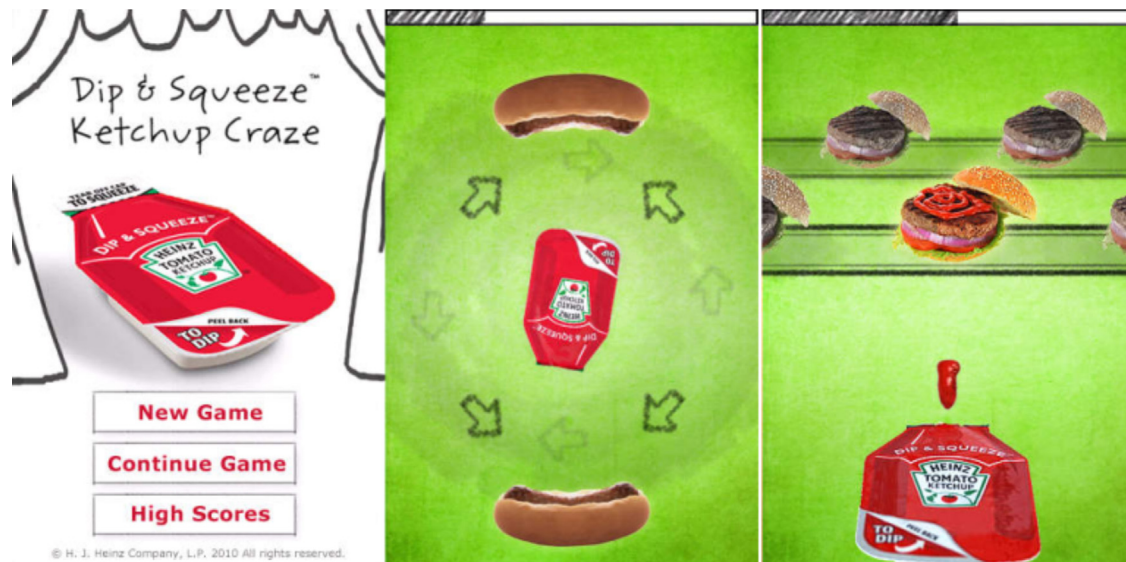
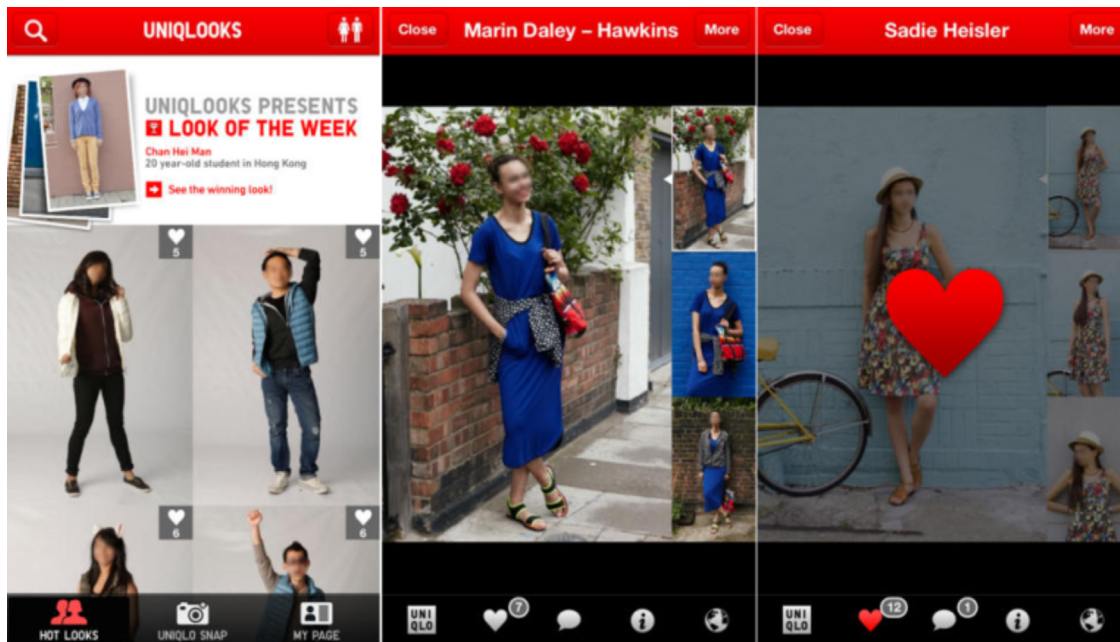


Figure 5. UNIQLOOKS app



on sharing customized messages but they do not create a community like the UNIQLOOKS app.

From the business perspective, social-centric apps aim to increase the sense of intimacy with customers, foster brand engagement by building a community of loyal customers, or allow customers to communicate positive brand images with their social circles.

3.4. M-commerce-centric apps

In m-commerce-centric apps, the goal is to sell products. Consumer personalization during the purchasing process and product customization are critical to achieving this objective. The IKEA Catalog app (Figure 6), for example, allows users to place furniture selected from the catalog into their own rooms. The Adidas Eyewear app allows users to create and virtually try on personalized glasses.

Abercrombie & Fitch’s Hollister So Cal Style app recommends clothing styles by asking users to take a short quiz, and also allows users to search styles by color.

3.5. Design-centric apps

Some brands develop creative and imaginative design-centric apps. CAMPER Weather: Have A Camper Day! is an app (Figure 7) that helps put a smile on users’ faces regardless of whether it is sunny or cloudy outside. As stated by the company (CAMPER, 2011):

This weather app is how Camper, the shoe brand, understands optimism: half imagination, half craft. To communicate this concept in a friendly, different and non-intrusive manner, we decided to take a new look at some of the things that are currently set in stone. The way we view weather forecasts today (with

Figure 6. IKEA Catalog app

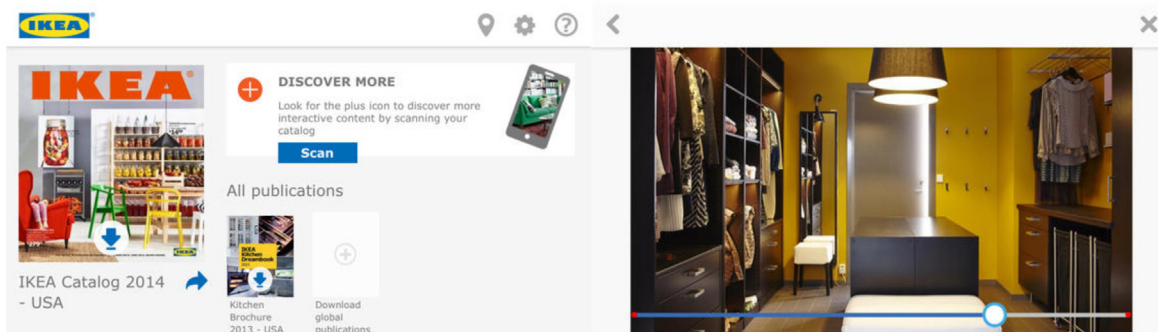


Figure 7. CAMPER Weather: Have a Camper day! app



boring, lifeless interfaces and icons) was a great starting point for us and seemed like the perfect tool for illustrating the philosophy behind the concept. As a result, we created new meteorological elements made from prêt-à-porter materials and turned them into musical instruments that react to touch. . . . Camper is not a specific shoe, but rather a style, a philosophy of life, a way of thinking and a way of making shoes. Camper is more than a company and more than a business. It's a team of people driven by creativity.

Nike's MAKING app is an easy-to-use reference guide to compare the impacts of materials; it is a tool designed to inspire designers and creators to make better choices regarding the materials they use. According to Nike (2013):

We know that every decision a designer makes in the product creation process has an impact on the environment. But given the range of options that exist, making informed choices can be a challenge. That is why MAKING matters.

Note that brands often design more than one branded app. Most apps focus on different products or business objectives; thus, companies tend to develop different types of apps. For example, Heinz has developed the tool-centric app, Food In A Minute, and the game-centric app, Dip & Squeeze™ Ketchup Craze. Johnson & Johnson has developed the tool-centric J&J Wound Care Resource™ app and the game-centric Happy Nurse app.

Brands can also implement a series of interconnected apps. Nestlé has designed a series of apps for children, named StimuLearn, which includes one game-centric app, Make A Match, and two tool-centric apps, Watch Me Go! and Storytime Duet,

to teach kids important values and educate them about healthy behavior.

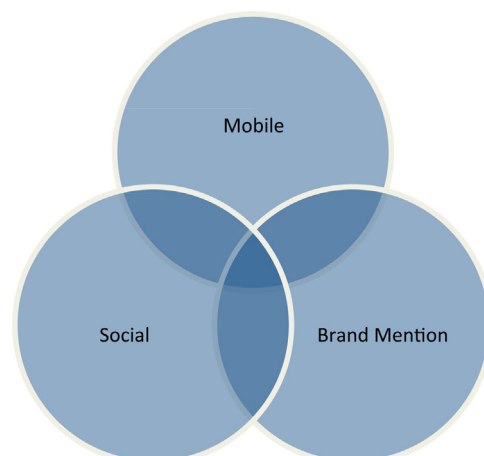
4. Functional building blocks of branded apps

In this section, we propose a framework including three functional building blocks (Figure 8) related to the most important features of branded app design: mobile, social, and brand mention. In each category, we further provide detailed descriptions of elements that can be used to design branded apps.

4.1. Mobile

The first building block is a focus on specific mobile features. It is important for companies to know

Figure 8. Functional building blocks of branded app design



which up-to-date mobile features should be utilized in branded apps.

Cameras allow users to snap or scan and provide marketing strategists with the possibility of encouraging users to take photos of branded products to share with friends or scan the barcodes/QR-codes on products to obtain brand/product information or access promotions. For example, L’Oreal’s The Color Genius app (Figure 3) uses the camera snap feature to ask users to take a picture of their current outfits and then proposes matching makeup products. The IKEA Catalog app (Figure 6) and Abercrombie & Fitch’s Hollister So Cal Style app also make use of the camera scan feature. When users scan selected pages in the printed IKEA catalog, the IKEA Catalog app displays films, 360° room sets, and the stories behind the furniture products. When users scan a barcode on Hollister clothing, the Hollister So Cal Style app will display complete, customized looks as well as style tips.

Location awareness has been widely used in branded apps, providing users with a stream of information based on their locations and interests. Like many branded apps, the Adidas Eyewear app allows users to search for the nearest Adidas store through geolocation.

Various mobile sensor technologies—touch, tilt, and proximity sensors—create rich interactions between end-users and mobile devices, allowing users to carry out single and multi-touch gestures like swaying, shaking, and swiping, among others. These gestures have been widely used in game-centric apps like the Domino’s Pizza Hero app, Johnson & Johnson’s Happy Nurse app, Heinz’s Dip & Squeeze™ Ketchup Craze app (Figure 4) and Kellogg’s Apple Jacks™ Race To The Bowl Rally app.

Voice sensors allow mobile devices to recognize human voices and have been used for CRM to directly answer customer questions. For example, the My L’Oreal Mirror app is a CRM app that utilizes the voice sensor to allow for real voice communications between the user and the app.

Furthermore, augmented reality (AR) technology combines virtual data with the physical real world, allowing users to perceive virtual products in the real environment. For example, the IKEA Catalog app (Figure 6) uses this technique and allows users to place selected furniture from its catalog in their own rooms.

Virtual mirror technology adjusts geometrically to reflect the viewers’ image in real time. This feature is used by cosmetics and apparel branded apps to allow consumers to check how branded products really look on them. For example, through the virtual mirror feature, the Adidas Eyewear app allows users to virtually try on glasses.

Beyond mobile technologies, short and smart mobile advertising videos are used to attract attention; in addition, viral video content can be shared through mobile social networks. Mobile payments allow users to pay for products directly through their mobile devices, anytime and anywhere. Starbucks developed Square Wallet, a mobile payment app that was launched in November of 2012. Due to the convenience of Square Wallet, to date, mobile payments have been implemented in over 11,000 Starbucks stores nationwide.

We classify mobile features in Table 1. All of these features are used in current branded apps.

Table 1. Mobile features used in branded apps

	Description
Camera	take a snap scan a barcode/QR code to get information
Location awareness	provide user information based on location
Multi-touch gestures	sway, shake, swipe; widely used in game-centric apps
Voice sensor	recognize human voices
Augmented reality	allow users to perceive virtual products in the real environment
Virtual mirror	adjust geometrically to reflect the viewer’s image in real time
Mobile video	short and smart viral video contents
Mobile payments	allow users to pay for products directly from their mobile devices, anytime and anywhere

Table 2. Social features used in branded apps

Social feature	Description
Interactions among contents	user-generated content (UGC) content personalization (e.g., content tagging) content rating and commenting content sharing
Interactions among users	online chat follow/unfollow people invite contacts from external social networks

4.2. Social

Social media provides new opportunities for businesses to engage and interact with potential users, encourage an increased sense of intimacy with users, and build all-important relationships with potential users. In digital business, social media is about harnessing collaborative and peer-to-peer approaches to create enhanced customer experiences through the co-creation of value using collective intelligence. Collaboration is self-managed and based on consumer free will rather than centrally managed and imposed by the brands.

Hinchcliffe (2013) predicts that social networking features will be noticeably added to traditional branded apps to allow for enhanced collaboration and sharing. Extensive studies have been conducted on the relationship between social interactions and users' online shopping behaviors. Christodoulides and Michaelidou (2011) showed that social interactions positively impact e-satisfaction and e-loyalty and represent a critical variable in e-commerce. Olbrich and Holsing (2011) demonstrated the positive impact of social functionalities on shopping behavior. Shin and Shin (2011) showed that social presence is a key element of buying on websites, reinforcing security and confidence. Additionally, Wang, Yu, and Wei (2012) investigated consumption-related peer communications through social media and its impacts on users' product attitudes and purchase intentions.

From the perspective of user involvement, we classify social features into two categories by taking into account the interactions among contents and interactions among users respectively (Table 2).

Interactions among contents contain user-generated content (UGC), content personalization, content rating and commenting, and content sharing features. In relation to UGC, research has shown that mobile apps tend to focus on sharing content in the form of photos and videos rather than text. For example, both the UNIQLOOKS app (Figure 5) and Avon's Send A Kiss app allow users to take photos of themselves—either their outfits or lips—and share them with social networks. Dove's Body Language

Messenger app uses user-generated text, but the text is highly innovative due to the fact that the letters provided by Dove are shaped by bodies.

In relation to content personalization, a content tagging feature is rarely incorporated into current branded app designs. In relation to content rating, commenting, and sharing, most branded apps allow themselves or their contents to be liked, rated, commented on by users, and shared with external social networks. However, not all apps aim to build a community for socializing.

Interactions among users contain features like follow/unfollow people, online chat (peer-to-peer conversation among people), and invite contacts from existing social networks. However, features like online chat and the ability to follow or unfollow people are rarely implemented into current branded app designs.

4.3. Brand mention

Brand mention indicates how companies market their brands within apps. Note that brands can be divided into corporate and product brands; for example, the yogurt brand Activia belongs to the DANONE group, so the corporate brand is DANONE and the product brand is Activia. We identify nine brand mention elements that are used in branded apps. Four elements are related to corporate brands and five elements are related to product brands, as shown in Table 3.

Out of these brand mention elements, corporate brand name/logo and product brand/logo appear on most branded apps. It is worth mentioning that the product brand packaging element often appears on tool-centric apps as product recommendations

Table 3. Brand mention used in branded apps

Corporate brand mention	Product brand mention
brand name	brand name
brand logo	brand logo
matching brand colors	brand packaging
brand mascot	matching brand colors
	brand mascot

(e.g., L’Oreal’s The Color Genius app in [Figure 3](#) and Heinz’s Food In A Minute app) and on game-centric apps as an object for players to play around (e.g., Domino’s Pizza Hero app). Also, product brand mascots are often used in game-centric apps as avatars for players (e.g., Kellogg’s Apple Jacks™ Race To The Bowl Rally). Moreover, some branded apps use the same color scheme as the brand logo, which is regarded as providing added value in brand communication.

5. Recommendations for branded apps

In this section, we provide some recommendations for branded app design. After reviewing branded apps from the top 100 brands, we conclude that the currently available branded apps are far from perfect, with most of the mentioned features not yet being well established in existing app designs.

The first recommendation relates to business objectives and app types. In sections 2 and 3, we identified five business objectives and five types of branded apps. Almost all app types can be designed to target each business objective.

In the case of the communication objective, tool-centric apps are commonly designed to inform users about how to use the brand’s products; game-centric apps aim to create an immersive environment through the use of different brand mentions and exposure to good brand moments that increase brand awareness; and design-centric apps communicate a sense of creativity, which adds great value to the brand image.

In relation to the CRM objective, tool-centric apps recommend products to branded app users; game-centric apps foster brand engagement while also collecting user data; and social-centric apps build communities to engage with loyal customers, while the sharing function allows customers to communicate positive brand images to their social circles. [Table 4](#) shows how different types of apps can be used to achieve different business goals.

The second recommendation concerns how different features are used in app designs. Depending on the type of branded app, companies can choose to include various mobile, social, and brand mention features.

For example, most tool-centric apps allow for app services or products to be shared with external social networks. Most game-centric apps implement multi-touch gestures like swaying, shaking, and swiping, and allow for achievements and scores to be shared on prominent social networks like Facebook and Twitter. With regard to brand mention elements, most game-centric apps are designed according to their products; thus, product packaging and product mascots are often used within branded apps. Some game-centric apps use the same color scheme as the product’s or brand’s color scheme. Social-centric apps tend to use social features like user-generated content, social rating, commenting, and sharing. Camera features are widely used in social-centric apps because user-generated content in branded apps is more likely to involve photos rather than text. [Table 5](#) illustrates different mobile features, social features, and brand mention elements relevant to different types of branded apps.

Table 4. Recommendations for app types

Type of app	Business objective
Tool-centric app	communicate brand values and products increase brand image and awareness make product recommendations collect user data
Game-centric app	brand engagement with loyal customers increase brand image and awareness make product recommendations collect user data
Social-centric app	brand engagement with loyal customers increase brand image and awareness product innovation make product recommendations collect user data
M-commerce-centric app	Sales increase brand image and awareness collect user data
Design-centric app	communicate brand values increase brand image collect user data

Table 5. Recommendations for features

Type of apps	Mobile feature	Social feature	Brand mention
Tool-centric app	Camera: snap and scan Location awareness Voice sensor Mobile video	Share with external social networks	Brand name/logo Product packaging Brand mascot
Game-centric app	Voice sensor Multi-touch gesture Augmented reality (AR)	Personalized user avatar Invite from external social networks Share with external social networks	Brand name/logo Matching brand colors Brand mascot
Social-centric app	Camera: snap Location awareness	User-generated content Social annotation Online chat Follow/Unfollow people Share via e-mail Share with external social networks	Brand name/logo Matching brand colors Product packaging
M-commerce-centric app	Camera: scan barcode/QR code Location awareness Augmented reality (AR) Virtual mirror Mobile payments	Product personalization Share with external social networks	Brand name/logo Matching brand colors Product packaging
Design-centric app		Share with external social networks	Brand name/logo Matching brand colors

6. Don't forget the users

In this article, we have provided a method that marketers can use to think about and execute business strategies related to branded app design. We have identified five business objectives, five types of branded apps, and three functional building blocks and provided various examples of relevant best practices. Note that companies should choose the features that they apply to their own business strategies wisely; furthermore, the features included in app designs should be chosen on a case-by-case basis. At the same time, the user perspective needs to be taken into consideration in the design process. Good mobile apps are aligned with different levels of user motivations and should engage them passionately. Intrinsic motivations for the use of mobile apps were discussed at the beginning of this article and include entertainment, functionality, information, socialization, intellectual stimulation, following a trend, and learning. Moreover, extrinsic user motivations to use of mobile apps can be leveraged through symbolic (e.g., the UNIQLO app) or monetary benefits. Finally, user attitudes toward branded

apps need to be studied further to guide marketers on how to build better apps.

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