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Gamification

An approach to marketing product innovation

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This contribution offers an introduction to gamification in a business context. Selected case studies illustrate how product-related games can be used to commercialize product innovations. Game elements and reward mechanisms are highlighted as central parameters that are necessary for the successful implementation of a gamification approach, and product-related games are identified as data providers. In addition, important implications for the marketing of product innovations are discussed.

Keywords: Gamification, game elements, points and badges, reward mechanisms

1. The phenomenon of "gamification"

More than 400 million people play computer games every day (see *IDAT*E, 2013), and it is estimated that the volume of sales in the global gaming market is currently estimated at around $70 billion a year (see PWC, 2014, p. 14). According to a survey by *Enterprise Gamification Consultancy* (2013), about 45 percent of German employees also play during their working hours. More and more companies are taking advantage of this passion for gaming; it is also being used in the marketing of product innovations under the keyword **gamification**.

Gamification can be defined as the application of game design elements in remote contexts (see *Deterding* et al., 2011, p. 10). Elements of game design are often used, which influence the motivation of consumers to become interested in a product and to familiarize themselves with a function. For example, through competition between participating consumers, their habits can be influenced and their behavior changed. In the case of the new *Nissan Leaf*, this mechanism is used to promote sustainable driving. To this end, the driver receives constant

feedback on their driving style and is in competition with other drivers of the same car model. The driver of the vehicle with the lowest resource consumption receives the virtual *Leaf Cup* (see *Zichermann / Linder*, 2013).

Although scientific research on these product-related games is still in its infancy, the practice is already in the process of promoting the marketing of new products with gamification. The number of gamification examples is soaring; hence, market volume for gamification approaches is expected to reach 5.5 billion US dollars by 2018 (see *Meloni*, 2012). At 35 percent, investments in the technical base are well ahead of investments in PC or console games, which account for 7 percent worldwide (see *Digi-Capital*, 2013). The existing gamification approaches can mainly be categorized into marketing, as well as into continuing education and training. The ECO *Trend Report of the Association of the German Internet Industry (registered association)* (2014) shows that gamification will develop far beyond these areas until 2020.

2. Manifestations of product-related games

Product-related games are used to support a variety of objectives. The following case studies provide an overview and illustrate the potential for marketing product innovation.

Product-related games are used, for example, to increase the **awareness** of a product or a product feature. At its launch, the Samsung Galaxy S4 was the first smartphone that had an eye-tracking technology. The company communicated this new feature with the help of a product-related game. The participants had to look at the display of a smartphone installed at Zurich main station for 60 minutes and were not allowed to avert their eyes under any circumstances. The successful participants won the smartphone. The longer the participants focused the phone, the harder it was not to be distracted, as musicians, motorcyclists and hot dog sellers tried to irritate the participants. With the help of the product-related game, Samsung succeeded in publicizing the eye-tracking technology in its latest smartphone: a total of 1.5 million viewers followed the participants in their competition for the mobile phone, both online and offline. The game was documented in a video that was clicked on about four million times (see *Swisscom*, 2013).

Other companies use games to increase consumer curiosity about new product features. To win the curiosity of potential drivers for *Volkswagen's* innovations, this company designed the *BlueMotion* Roulette. For this, Volkswagen subdivided the Atlantic Route E6 (the Norwegian equivalent of the USA's Route 66) into 80,000 small sections and let a Golf BlueMotion with only one tank fill this road from south to north. Participants of the roulette were able to estimate how far the *Golf* would go with the tank. It could be set only once on each section. The chances of winning could be increased through having better knowledge of the product attributes. There were numerous sources of information available for this purpose. The winner of the BlueMotion Roulette was the *Golf*. The campaign was a great success for Volkswagen with more than 50,000 participants (see Lopez, 2011).

The company *Autodesk*, which offers very complex and expensive design software, managed to increase the **decision-making reliability** of potential customers with the help of a game. Knowing that the conversion rate will double from using the trial version three times, the

company created a trial version that sent users on missions. They gained insight into the functionality of the product, were able to collect points, report their performance on Twitter and Facebook others and compete with other users of this trial through their ranking. The redesign of the trial version not only led to more downloads of the trial version itself, but also to an increase in the use of the trial version by 40 percent (see *Badgeville*, 2012).

The success of new products is determined not only by the purchase, but also by the subsequent use. Games are therefore not only used in the pre-purchase phase, but are also used in the purchase or post-purchase phase. Once purchased, a game can be used to **retain customers** and reduce the **likelihood of switching** to lower-cost vendors. With Office, *Microsoft* offers a software package that is time-consuming to learn, but offers the experienced user a wide range of functionalities. In order to show the customer the benefits of the purchased product, *Microsoft* designed the game *Ribbon Hero*. Within several missions, users learn the functional scope of the software package. For the solved challenges, they receive points that determine their placement in the leaderboards. As knowledge increases, the users rise level by level. In the first version of this game, 60 percent of all users who had completed at least two missions completed all ten available missions. Due to its immense success, an extended version (*Ribbon Hero 2*) was launched. The success rate achieved with the first version was thus doubled (see Beresford, 2011).

Product-related games are also considered to increase **interaction frequency** and **quality**. This should be clarified using the example of the *SAP Community Network* (SCN). In 2007, SAP opened a social network (SCN) to give users of *SAP Enterprise Software* the opportunity for exchange and support. However, the involvement of the members and the average quality of the contributions fell short of expectations, although game elements, such as receiving points for contributions, were an integral part of this network from the outset. Therefore, there have been several enhancements of the *SCN* up to today's version, which has been in operation since 2013. In particular, the scoring system has been reformed over time so that the number of points awarded can be seen as an indicator of the quality of each contribution. In addition, members can go through a variety of levels and compete with other members based on leaderboards. Membership activity increased by 400 percent and community feedback increased by 96 percent (see *Cetin*, 2013).

The **possible applications** of product-related games far exceed the mentioned fields of application. Gamification is also used to influence user behavior (e.g. *Nissan Leaf*), to increase loyalty (e.g. *My NFL Rewards*) or to reduce online shopping crashes (e.g. *Are You a Human?*). Likewise, game elements are used to support crowdsourcing activities (e.g. *Photocity*), to increase employee motivation (e.g. *LiveOps*), to promote team building (e.g. *Hifli*), and to guide healthy living (e.g. *Weight Watchers Challenge*). Numerous other applications will become established in the coming years.

3. Architecture of product-related games

The basic element of any game and any gamification application is a well-defined **goal** that sets a framework and guides the consumer (see *Juul*, 2003; *Robinson /Belotti*, 2013). The

achievement of the goal can be challenging, depending on the design, and be rewarded through various reward mechanisms. In the discussion about gamification, a variety of such game elements and reward mechanisms are illuminated. The facets discussed below can be combined in any way. The context in which elements are to be applied is decisive for the choice of elements. Hence, not every element is equally effective in every case.

Feedback in the sense of a proof of achievement can be used in the context of a gamified application in order to visualize the consumer's performance (see *Robinson/Bellotti*, 2013). Timely feedback that directly follows an action is seen as motivational and can increase the learning and the efficiency of a consumer. In the case of negative feedback, the consumer is given the opportunity to make adjustments to improve his performance. Positive feedback, on the other hand, reaffirms consumers' ability to continue on their path. However, immediate feedback may in some cases disrupt the flow of an action. Therefore, in activities that demand a high use of mental resources, it may well be advisable to postpone feedback (see *Kapp*, 2012, pp. 35)

Levels can be seen as an indicator of the achievement of goals (see *Kapp*, 2012, pp. 37, *Paharia*, 2013). They reflect the status achieved by the user of a gamification application. Also, they allow conclusions about the time invested so far and the efforts involved in advancing to more difficult levels. By steadily increasing the difficulty, they secure the balance between the consumer's abilities and the challenge to be mastered. Thus, they prevent excessive demands or the ensuing of boredom. Therefore, they are particularly useful for training purposes, such as learning new products. If there are several levels within a gamified application, it is a good idea to connect these levels with the aid of a frame story in order to be able to present the consumer with a comprehensible structure of the gamification application.

In product-related games social game components, such as the formation of teams, can also be integrated. If a gamification application involves the formation of **teams**, teamwork and cohesion are the keys to success. This can lead to a polarization that allows consumers to make decisions (in a positive and negative sense) that they do not make outside a group context (see *Lamm*, 1988).

Competition, as another social game component, can emerge in a variety of player compositions and take on a variety of forms. For example, consumers can compete directly against each other or compete against each other on rankings. Competition tends to increase intrinsic motivation, as a competitive situation encourages the successful user of a gamification application in its own competence (see *Reeve/Deci*, 1996). However, failure in a competitive environment can also lead to negative consequences, as it may inhibit the learning of complex situations (*Lam/Yim/Law/Cheung*, 2004).

The time available to the consumer to solve a challenge within a game can vary. As a result, **time pressure** can be generated. This helps to increase the attention and engagement of consumers. However, in the case of a complex task, such as learning new software, time pressure can be a hindrance to learning success (see *Kapp*, 2012, p. 32).

The **reward mechanisms** used serve to reach the goal of the game faster or better. Depending on the objective, points can be awarded, badges and trophies awarded, or gifts distributed. **Badges** demostrate the achievement of a specific goal to the consumer. They can be an incentive and an obstacle for the consumer at the same time, since, after receiving a badge, the reason for doing the action is eliminated. If points are used to show the consumer how thoroughly they have already fulfilled a task, they can serve as an indicator of the degree to which they have achieved their goals. This can motivate them to do even more work and is therefore particularly suitable for a training and educational context. While each gamified application has clear objectives, it is also possible to include surprising rewards that honor creative or exploratory behavior.

4. Product-related games as data providers

While playing product-related games, numerous data, such as consumer **location information**, are recorded in the background. Especially with smartphone apps, features such as the GPS function are integrated into the game world of product-related games. An example of this is the game that *VeloPlus* (a bicycle and accessories retailer) has embedded in their smartphone app. By cycling through a virtual world, the player can earn points, climb from level to level, and win real prizes, such as an innovative fender system. Their location information is collected in the background via the GPS function of their smartphone. This information is matched with the addresses of the *VeloPlus* branches and the branch closest to the player is identified. After winning a prize, the player can be directed to the nearest store where they can pick up their prize (see *Sala*, 2014).

The data collected through product-related games can also enable companies to be inspired by the consumer in the area of product innovation. As physical products become more interconnected with the Internet, it is becoming increasingly easier for companies to embed products into games. This enables companies to gain a better insight into the consumer's usage behavior. This can help them, among other things, with the further development of products. *Nike+*, an online community that now has nearly 30 million members, allows members to compete for the highest score (see *Nike+ Fuel Lab*, 2014). To do this, they need the *Nike+ Fuelband*, a wristband that measures the wearer's movements and displays them as a score. On an online platform, the wearers of the *Nike+ Fuelband* can associate the score with their personal information on age, height and weight. In addition, they can specify the base of their running track and the shoes used while running. Registered usage data enables *Nike* to improve **product development**. For example, by specifying the running shoe, the life or useful life of a particular running shoe can be measured at a given exercise intensity. Also, the needs of different runner groups can be better assessed depending on user-specific characteristics (e.g. age, weight).

5. Implications for the marketing of product innovations

Product-related games are particularly suited to spreading the message that a new product will be introduced to the market. Previous examples, such as the Samsung S4 Stare Down, show that product-related games stimulate online and offline discussions about the new

product. This not only puts the product in the consciousness of the participants but reaches a much larger number of consumers. The level of **awareness** of product innovation rises.

Furthermore, a gamification approach can help arouse consumers' **curiosity** about product innovation. The motivation-enhancing incentives of product-related games can encourage consumers to actively engage with information about product innovations or even obtain additional information. This was also demonstrated through the Volkswagen BlueMotion Roulette, where participants actively engaged with the abstract information on product innovations in the area of sustainability.

Another barrier to commercializing product innovation is the perceived risk to consumers. Consumers often find it difficult to assess whether the product will meet their needs before purchasing a product innovation (see *Hoeffler*, 2003, pp. 408). Therefore, buying product innovation for consumers carries the **risk** that the product will not give them the expected benefits. The perceived risk of product innovation can prevent the purchase (see *Geroski*, 2000, pp. 607). Gamification offers a possible solution to this problem, because product-related games enable consumers to experience a product before buying it. You can test the product in a playful environment that forgives mistakes. This allows them to better estimate the expected benefits. As a result, their perceived risk can be lowered and their decision-making reliability strengthened. This is also shown using the example of Autodesk.

For the reduction of the perceived risk, the competent advice of **qualified personnel** can also be crucial. Consumers who are unsure about the benefits of a product often seek advice from sales personnel. Therefore, when introducing a product innovation, it is necessary for the sales staff to be informed in detail about the functions and characteristics of the product. Again, product-related games can help motivate people to increase their **knowledge** of product innovation.

After purchasing a product innovation, it is crucial that a consumer learns the **relevant functionality** of the product. Without learning the relevant functions, the consumer will not derive the maximum benefit from the product. But learning a new product can take some time. In order to motivate the consumer to learn the relevant functions of the product, product-related games can be used. This has already been successfully implemented by *Microsoft* with their *Ribbon Hero Game*.

For businesses, product-related games also provide a rich **source of data** that can be helpful to them in developing product innovation. Some companies, such as *SAP* and *Nike*, are already developing new products based on the collected game data, tailored to the needs and preferences of their customers.

Although product-related games provide great opportunities for marketing product innovation, it should be noted that the context must always be considered. The *SAP* case has shown that not every gamification approach is automatically successful. The choice of game elements must therefore be well-considered and well-coordinated. The sole addition of points and badges is not enough. When designing, care must be taken to integrate the preferences and interests of the consumers. Because if consumers do not develop an interest in the gamified features, the features can't exert their effect (see Hamari, 2013).

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