Gamification – Creating Value Through Games: Part I

Life is just a game – several artists have sung about that. Meanwhile, Marc Sodermanns explains how gamification can help us master our sometimes-tiresome everyday life in a gamified way.

Gamification is one of the most present buzzwords of the last few years. Some companies now specialize on this and extend their performance spectrum in that respect. But what exactly is gamification? Which methods are there to use it, and what's the benefit and profit? In this article, I will try to shed some light on the topic and hopefully also reach readers who have been familiar with gamification for a while already to introduce new and interesting approaches to them, too.

Early Days

I first came across the subject of gamification in 2010. In his talk »When Games Invade Real Life« at DICE Summit 2010, Jesse Schell, a top game design expert, author of the famous book »The Art of Game Design« and owner of SchellGames talked about game elements already applied in our everyday life. This lecture triggered us to start thinking outside the box and applying our expertise beyond the gaming world.

In game development, these approaches were already reflected in games like »Guitar Hero« or »Sing Star«, which were already moving beyond the mere gaming world. Guitar Hero, for example, is played on a controller designed like a guitar, and in Sing Star, your input device is a microphone. Further developments included Facebook games where you log in with your own account to play with your real friends or challenge them directly.
The console manufacturers Sony, Nintendo and Microsoft, on the other hand, introduced achievement systems which were sort of extended »scoring systems«. These were and still are usually of a purely cosmetic nature. This means that they don't have a deeper purpose in the game, but are rather just medals; level or ranking systems which serve as

a progress indicator for the players to give them »bragging rights«. All these examples break the barrier to reality in a gamified way. A development which game designers first had to get used to since realism was until then rather based on visual realism or in its gaming context. People mainly played computer games to escape the real world.
In his presentation, Schell already showed off first »gamified« concepts. He talked about an approach to improve people's driving awareness through gamified ideas. A Ford hybrid is showing a plant in the cockpit. The more fuel you save, the bigger the plant gets – a kind of »tamagotchi« for your car so-to-speak. This not only affected the people's driving behavior, but also reduced the user's – the driver's – expenses on fuel. This project wasn't developed by professional game designers though.

First Gamification Approaches

Game designer Lee Sheldon developed a very interesting method to determine school grades. He introduced »experience points« as known from games at schools and used them instead of grades. The students' grades were then determined through »level-ups«. The system was very well received and resulted in higher attention and motivation of the school kids on the one hand, and on the other hand, the school benefited from a better structure and clear arrangement.

»XP« for better grades: Lee Sheldon's »Level up« system was very well received at test Schools (source: https://www.slideshare.net/autnes).

Schell also provided an outlook as to what extent gamified processes could enter our personal and daily lives, for example, to take established bonus point systems to another level or to gamify daily routines like getting up or brushing your teeth. One possibility would be to link these processes to bonus or reward systems. For example, you would earn points and various bonuses based on how thorough you brush your teeth. This encourages regular oral hygiene and has a positive effect on dental health, which again relieves the health insurance companies. And the toothpaste manufacturer is happy about the higher toothpaste consumption. These gamified ideas can be applied to further

daily processes. During breakfast, you collect points when eating the cornflakes of brand XY.

On the back of the box is a free mini-game which you can play while you eat – of course, that game is linked to Facebook or a similar type of media through which you can challenge your friends. You collect points when you take public transport to protect the environment. You can also earn special bonuses when arriving at work on time or for wearing digital tattoos which can be adapted anytime and thus serve as advertising media. You collect further points for visiting a certain restaurant during your lunch break and ordering a specific menu. You get bonuses for wearing special shoes which track steps and distances and tell you exactly how much you move. These rewards are given through the healthcare system. Ideas like this can be continued in any way, and it’s pretty clear already how much potential there is in gamification and its link to our daily routines.

Present Day

Oh, sweet gamification: Sweets manufacturer M&M’s increased its reach on Facebook with the help of simple search games.

Schell gave a number of interesting examples about how the many playful approaches could be integrated into our daily life. Six years later, some of his visions have actually been put into practice, at least to some extent. But before we get into gamification in detail and look at some application examples, I would like to provide a brief explanation of the terms »game« and »play«. A term that’s often used in context with gamification is »game« or »gaming«, which, strictly speaking, is different from »playing«.

Level 1.0: Game vs. Play

Level 1.1: Game

What exactly is a game? Several game designers and philosophers have addressed this issue; a more precise definition of the term »game« is not possible, according to the famous philosopher Ludwig Wittgenstein. In »Philosophical Investigations Aphorism 68« he writes: »For how is the concept of a game bounded? What still counts as a game and what no longer does? Can you give the boundary? No.«
The author Bernhard Suits, on the other hand, states in his book »The Grasshopper: Games, Life and Utopia« that we can very well define what's a game. All games can be determined by three concepts:

- – Prelusory goal
- – Constitutive rules
- – Voluntarily overcoming unnecessary obstacles

In detail, this means that a game consists of a goal/goals, rules as well as a feedback system and is played voluntarily (intrinsic motivation). Huizinga writes in his book »Homo Ludens« about the magic circle (see graphic below), which differentiates or separates the game world from reality. In a game, there's a physical and a virtual boundary, like the sidelines of a football pitch. When you're in the game world, only the rules of the game apply, not the ones of the real world. I think Sid Meier, game designer of the game series »Civilization« or »Pirates« nailed it when he said: »A game is a series of meaningful choices«. As Jesse Schell already put it, a game is a problem-solving activity in a playful manner.

Level 1.2: Play

Friedrich Schiller described the term »play« in the following way:
»Play is the aimless expenditure of exuberant energy«. The philosopher George Santayana considers »play« to be whatever is done spontaneously and for its own sake. Katie Salen and Eric Zimmerman, on the other hand, describe »play« in their interesting book »Rules of Play« as »free movement within a more rigid structure«. The game has no purpose, is played for its own sake and allows, where possible, the feeling of freedom and exuberance without fixed rules or goals.

Level 1.3: Serious Games

The term »Gamification« is often used in context with the related concept of »Serious Gaming«, meaning games whose aim goes beyond pure entertainment. Examples for this are 3D computer programs where, for example, fires have to be put out in the most effective way possible, or flight simulators where the user carries out take-off and landing maneuvers. Besides the gaming aspect, these programs can have learning and training effects which are important for the training of firefighters or pilots respectively. So,

Serious Games are games which (additionally) serve a serious and productive purpose. In contrast to this, gamification uses gaming elements to add to processes yielding added value and thus create a positive effect.

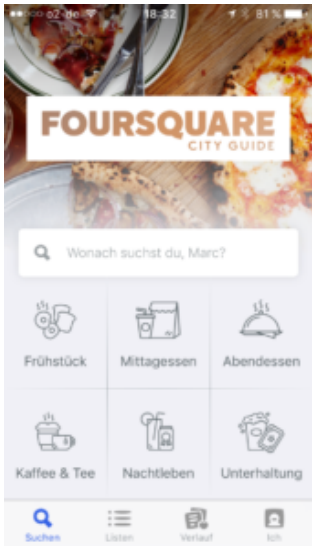
Gamification and serious games basically represent the same approach by transferring the positive qualities of a motivating and inspiring type of media to other contexts and purposes beyond the entertainment value.

Level 2: What is gamification?

After this brief excursion, let’s get back to the actual topic:
Gamification means to create processes which have a certain monotony about them in an intriguing and motivating way – i.e. transferring game-typical elements into non-gaming contexts. To do this, elements from the gaming theory are embedded in processes which don’t have a lot or even nothing to do with games. The modified experience motivates the user more to fulfill complex or simply boring tasks. Motivation and seduction make it possible to create long-lasting results.
The important thing in this process is that the users can see and understand the progress of their actions. This process can be portrayed in different ways, for example through awards, progress or level indicators, defining the status of the user. Gamification must always happen on a voluntary basis; it should never be forced upon the user. Unlike games, you can’t lose in gamified products, and the user always gets positive feedback. Once won, badges won’t be taken away again, under no circumstances.

Level 2.1: Gamification Elements And Applications:

In his book »Web Fatale«, Johannes Ippen provides an excellent list of various gamification elements. This may, for example, be highscores. The user can compete with others or with himself, for example in rankings or through top-ten selections. Or he can compete and compare himself with others via missions. This gives the user something to do – a task – and he should never be left alone in the interface, but always be presented with a task or some kind of orientation.



The recommendation app »Foursquare« allows check-ins to special locations, through which users can again earn points, bonuses and badges and move up in a ranking system.

Just like in other game-typical applications, the important thing is to get feedback. Every action causes a reaction, no matter whether micro (small) or macro (big) feedback. Every reaction should be comprehensible and transparent and be explained the first time, in case of doubt, for example via pop-up or a slowed-down animation.

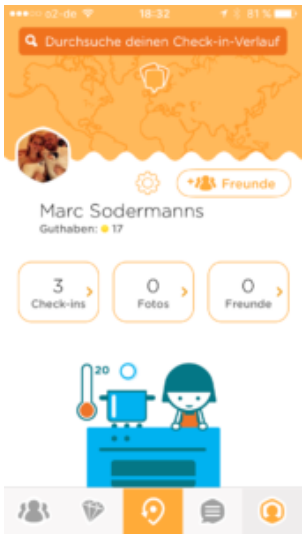
Also, all actions should be meaningful, and the user should always be motivated by the »big picture«, which we, the developers, should regularly remind him of. The more realistic the application, the bigger the learning effect and the satisfaction after completion.

The social component, the act of playing together, is also an important element since it’s just much more fun to do it with friends – not only the competition, but also the sharing, the recommendations and the mutual complementation. And last but not least:
Don’t overload the user with
information, but rather provide him with
features and details bit by bit and only where really necessary.
All of these elements are clearly taken from game development and game design.

Level 2.2: Where Is Gamification Happening?

A lot of big companies like Nike, SAP, Dell, Universal Music, Samsung, and many more use gamification methods, and the number is constantly on the rise. These days, games are »powerful things« which – when specifically used for gamification purposes – can create a very high added value. It’s important to evaluate which gamification approaches are

eligible and how they can be implemented according to a company's needs both technically and with regard to their characteristics.



The design of the gamification functions should be as intuitively usable and comprehensible as possible and the complexity be kept at a minimum to avoid a cognitive overload
which may disrupt the game-like concept.
Externally, gamification is used for clients in marketing, sales and customer service; internally, it's applied in departments like HR or to increase productivity. The most prominent example would be the game developer Wooga. Wooga used gamification to increase the internal productivity and motivation. For example, the employees receive badges for special actions like spotting and fixing a software bug or for completing 100 levels in a Wooga game. These badges are displayed in an internal staff data base and help determine the status within the company.

Gamification can also be used for fostering behavioral changes, for example in healthcare, sustainability or finances. An interesting project carried out in Stockholm was a speed check where a camera measured and showed the speed the cars had. It took pictures of drivers who broke the speed limit and who were then fined – nothing unusual so far. But the camera also took pictures of those drivers who stuck precisely to the given speed limit. The latter ones automatically took part in a lottery and, with a bit of luck, received a price money as a reward for driving reasonably. This led to a reduction of the average speed in Stockholm from 32 to 25 km/h. It was the best of both worlds: The drivers had the chance to win money, while the government could lower its own costs.

Credit rating/bonus programs are already an established and popular system, to pick up again on the subject which Jesse Schell brought up at his DICE talk. Employees who generated the most sales within a month or reached certain (company) goals, received a

price or a premium. Frequent-flyer programs use level systems where you go up the ranks through collecting points – from normal to premium or executive flyer. »Weight Watchers«, on the other hand, uses the participants' teamwork to share information and success stories with one another.

Level 2.3: Why Gamify? Gamification Put Into Practice

Gamification is a process of acquiring game design principles and popular mechanics as well as elements from the world of games and the transmission to non-gaming contexts. There are already a lot of examples where the use or the popularity of a product or a company could be increased significantly through successful gamification.

»Treehouse« offers online web design and coding classes. Depending on the expertise they gained, students can earn special badges which can also be seen by potential customers.

One of these popular examples is »Foursquare«, a location-based recommendation service app for restaurants and other institutions. Additionally, users can make social check-ins in these locations to collect points and awards, through which they can move up in a ranking system. Those who check in most often have the chance to become mayor of one of the locations.

An additional app called »Swarm« lets users also connect with their friends to see where they check in. In this case, gamification is used to collect data and user experiences.

The provider already benefits from more than 20 million members who voluntarily share their private data. The user on the other hand has access to a comprehensive location data base with rating systems similar to »Yelp« or »TripAdvisor«.

Gamification As A Marketing Tool

Gamification is already used by brands to appeal to the curiosity and motivation of their customers. Some brands create advanced apps which include a practical application of

their products. Sweets manufacturer M&M’s, for example, used the gamification approach to introduce a new product range in an innovative and game-like way. A simple graphic showed the established M&Ms sweets, with the new product hidden among them in the shape of a small pretzel – the task was to spot the pretzel. This comparatively easy and inexpensive idea helped M&M’s to increase the awareness for the company and especially for the new product. The company’s Facebook page registered over 25,000 new likes, more than 6,000 shares and over 10,000 comments.

»Nike+«, on the other hand, is one of the most popular gamification applications which appeals to a lot of potential customers with its product. It’s a sneaker with an integrated tracker which tracks the walking or run paths and displays them in an app which records all activities and turns them into points. This motivates the users to repeat and to master tasks with increasing eagerness and to compete with each other during their daily training. Reaching certain levels unlocks trophies and awards, through which Nike increased motivation to share results on social media even more, which again benefitted the visibility of the brand. The gamified feedback of the sports activities led to more than 5,000,000 new users! Through this viral gamification process, Nike strengthened customer loyalty, and at the same time was able to collect a lot of data over a long period of time. The information gathered thus increased the productivity of the R&D and online departments.
Nike+ was so successful that other providers, too, used this idea for their business purposes. An entertaining example is »Zombies, Run!« – a game where you have to escape from carnivorous zombies instead of competing with friends. The game combines the core principles of Nike+ with story-telling. The users are inserted in a zombie-infested world and are told by a narrator whether it’s time to run for their lives because an army of zombies is breathing down their necks.

The Game Of Disclosing Data

»Twitter« uses the Gamification aspect in a different way. If you create a new account, you are prompted to follow at least three other persons from a selection of ten other Twitter users – while being explained how »following« works. You can see the selection of those you are following and who is actually registered with Twitter. The personal feed then consists of tweets of the selected accounts. The users immediately experience the consequences of their actions, and the actions lead to a positive feedback which is a very important factor of gamification. Every action needs to deliver feedback, whereby negative feedback is to be avoided. The feedback should also be communicated transparently, meaning: How many points do I get for this action? What happens if I click here? How far away am I from the next rank? What does it take for me to level up?

The business platform »Linkedin« does it in a similar way. While creating your profile, a graph shows how many percent of the profile you have completed or how much information you have already provided and the according strength of your profile.

Similar to Twitter, »Autodesk« uses interesting gamification mechanics to bind users to their product. The goal of their product range was to increase the use of software during the test phase and thus the likelihood of a purchase. How is this goal implemented? Users can download the free test version of »Autodesk 3DS Max«, collect points by completing missions, move up in a ranking system and earn awards. On the one hand, the users learn how the tool works in a gamified way; on the other hand, they have the opportunity to win real prices like the full program license. This process helped Autodesk to increase the use of the test version to 54 percent, the conversion rate was 15 percent, and sales increased by 29 percent.

Questionable App

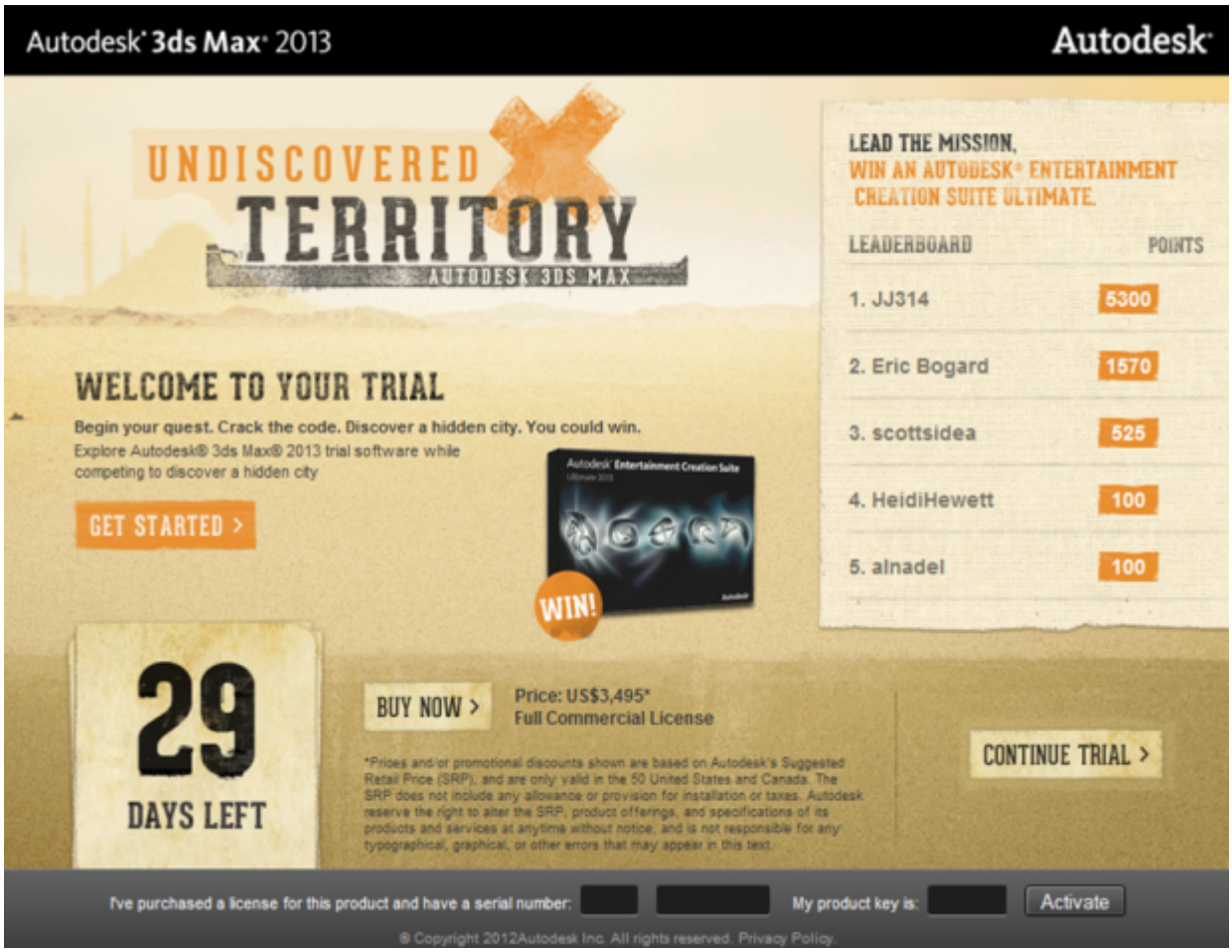
Even the American military has discovered the gamification model and used it for its own purposes. They ordered the development of a computer game called »America's Army« (americasarmy.com).

A negative connotation: The website of the US-Army shooter »America's Army« looks almost identical to the actual recruitment page.

The first-person shooter is to provide a graphic image of how the use of weapons on duty would look like in reality. America's Army is free; the players register with their real data. In the game, they collect badges and accolades, just like in the real military service. The actual recruitment website of the American Armed Forces looks very similar though, the structure is even almost identical to the game website. With a free game, new players are systematically introduced to military structures, and, worst case, join the US Army – maybe even without noticing.

Additionally, the army is constantly looking for technically versed young people with quick reflexes. Sometimes, the recruitment agents even approach top gamers directly. So, the

American Army uses gamification almost in a fraudulent way by trespassing the boundary to the so-called »dark pattern«.



Play your way to the full version: The test version of »Autodesk 3DS Max« not only introduced potential customers to the functions of the program through playing; they even had the chance to win a full version.

»eLearning«, too, makes use of gamification methods to bind and motivate their users even more. eLearning is becoming increasingly popular in trainings and other forms of knowledge building. Together, the five biggest open eLearning platforms already have more than 15 million registered users. eLearning classes are characterized particularly by the great freedom for their users who can choose what they're interested in, when they study, where they study, and how fast they study. Businesses, too, have started to recognize the potential of eLearning a while ago and implement it more and more through concrete offers.

One example for such online classes which are based on gamification methods can be found on TeamTreehouse.com. »Treehouse« offers classes in web design and coding, where participants can collect badges which serve as indicators for achieved successes and acquired expertise. These badges can be seen by other users, and even recruiters of bigger companies are eager to view this kind of information.

Level 3: The Future:

Just like Jesse Schell predicted almost seven years ago, some methods and elements taken from the gaming world have already found their way into our everyday lives or products which we come across on a daily basis. Companies which want to successfully use gamification as a business model have to be ready for it and accordingly be open for something new. Their product and tonality have to be suitable for it. And besides the technical perspective, it's essential to identify the needs of the employees or the project, to know their preferences with regard to gamification, and to take the company culture into account.

There is no »one size fits all« solution. Everyone has different preferences and reacts differently to various incentives. Wrong incentives should be avoided and considered though when defining a gamification concept. If a person is rewarded points for posting in social media, this may quickly lead to the person producing a high number, but not necessarily useful or high-quality posts. It should be avoided that gamification elements gain too much importance and thus repress the internal motivation at work. What's also important is to check at the end of each project if the set goals like higher user numbers, user frequency or quality level have been reached, for example, by tracking data or interviewing participants.

The question how added values resulting from gamification can be precisely measured is still largely unanswered. For one part, there is a lack of tangible examples, but often companies also lack the required resources. And yet, it's abundantly clear that gamification has a significant potential for being used in said areas and that it can contribute to increasing satisfaction and productivity. Gamification requires a solid conception and knowledge of game design, psychology, computer science, education science and economic aspects.

Interested?

If you got interested in the topic of gamification, be it professionally or privately, and you would like to delve deeper into the subject, you start at the right time. The initial enthusiasm about gamification may have faded a bit, but it still exists. We're currently in a phase where we can find out how gamification works and the effects it can have. Its potential is enormous, as are the possibilities to further explore this subject. Feedback is therefore extremely important, and I would be very happy if you could let me know yours at mail@creative-pixels.net.

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Marc worked in the games industry for four years. He worked at Funatics Software and Blue Byte GmbH, among others, and he was a Game and UI/UX Designer at Ubisoft. He is also a freelance Game, UI/UX and Motion Designer. After four years in the games industry, he is now in the advertising industry, working as Art Director at Palmer Hargreaves where he is particularly in charge of the digital department. He still is a passionate gamer.