UNIVERSITY OF LJUBLJANA SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

USING GAMIFICATION TO INCREASE CUSTOMER ENGAGEMENT: THE CASE OF MAYAMAYA BRAND

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ALEKSANDRA PETROVSKA

AUTHORSHIP STATEMENT

The undersigned Aleksandra Petrovska, a student at the University of Ljubljana, School of Economics and Business, (hereafter: SEB LU), author of this written final work of studies with the title Using Gamification to Increase Customer Engagement: The Case of Mayamaya Brand, prepared under supervision of Ph.D. Jure Erjavec.

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LIST OF ABBREVIATIONS

US – United States MUD – Multi-User Dungeons RPG – Role-Playing Games FPS – First Person Shooter DESA – Department of Economic and Social Affairs

- **UNEP** United Nations Environment Programme
- **SDG** Sustainable Development Goals
- $\mathbf{U}\mathbf{K} \mathbf{U}$ nited Kingdom
- **EPA** Environmental Protection Agency
- **OECD** Organisation for Economic Co-operation and Development
- CLP-City-Light-Poster

INTRODUCTION

From early childhood, people are introduced to games as engaging and educational processes. Games are deeply embedded in our societies, cultures, and human experiences overall (Berger, Schlager, Sprott, & Herrmann, 2017). As such, games started to get introduced to the domain of marketing with a similar context engaging the customers and thus laying the foundations for adding games between the consumers of a brand and the brand itself (Holbrook, Chestnut, Oliva, & Greenleaf, 1984). Gamification can cause feelings of pride in the consumers and it can satisfy two primordial needs that humans have: socializing and gaming competitiveness (Moise, 2013). In practice, gamification is used in almost any industry from cancer treatments to educational systems, to the fashion industry, engaging customers regardless of whether they are aware of being a part of a gamified process.

For these reasons, the gamification market is constantly growing and developing along with the development of technology. According to market analysis, the gamification market was predicted to grow from \$242 million in 2012 to \$2.8 billion in 2016 (McCormick, 2013). The reality exceeded these predictions since the market was valued at \$4.9 billion in 2016, and it is expected to reach \$11.9 billion in 2021 (Statista, 2018).

The fast advancement and steady market growth of gamification give insight into how successful a good gamified strategy can be in any industry. The primary aim of gamifying processes is to motivate the users (in this case consumers, but not necessarily limited to) to engage with the brand. The majority of success behind gamification has to do with the psychology of the consumers, and less to do with technology.

When it comes to motivating users, there is evidence supporting the thesis that intrinsic and extrinsic motivators may be complementary, as opposed to contrasting (Stringer, Didham, & Theivananthampillai, 2011). Since people vary, and their motivating factors differ, in the area of consumers it may mean that simply offering discounts or other extrinsic motivators might not properly work without the intrinsic motivation added. This might be the reason why gamification is successful in engaging consumers by providing additional value or intrinsic motivators through a storyline.

A great example of providing strong intrinsic motivation when it comes to gamification is *green gamification*. Green gamification means using gamified processes to inspire sustainability and inspire the formation of eco habits in participants. Additionally, it can promote products, services, and experiences that are truly ecological (Chastan, 2016). The rise in eco-awareness in consumers has been the subject of many scientific journals and papers. One such US¹-based study conducted by the Center for Sustainable Business by New York University found that 50.1% of the market growth from 2013 to 2018 was delivered

¹ United States

by sustainability-marketed products. These products represented 16.6% of the consumer packaged goods market in dollar sales in 2018 (New York University Stern, 2019).

The fact that consumers are increasingly paying attention to the sustainability practices of the brands they are purchasing products from makes this a big priority from a business point of view. Additionally, sustainability is a move in the right direction from a social point of view, seeing that the well-being of the planet and overall ecology benefits us all as human beings.

The ecological practices should specifically apply to industries that are great pollutants. Such industries that I will base my thesis around and that is the clothing and fashion industry. According to a briefing from the European Parliament in January 2019, the fashion industry is among the top polluting industries in the world. In fact, it affects 2-10% of the environmental impact on EU^2 consumption (Šajn, 2019). In addition to these stats, consumers have increased environmental awareness and investigate the products they purchase meticulously.

Due to these reasons, the industry has a great incentive to change towards being more sustainable. As stated in the 2019 Pulse of the Fashion Industry report, large clothing and sports apparel companies are leading the way towards better sustainable practices by investing in new technologies. The companies in the mid-price segments are doing major improvements as well. Even fast fashion is substantially improved towards being more sustainable. (Šajn, 2019)

If consumers are willing to better choose the products and even pay higher prices for sustainable products, then sustainability can be a great intrinsic motivator for consumers to engage. In this thesis, I will try to discover if using gamification in the name of being more sustainable will result in an increased customer engagement with the brand in question-Maya Maya. Maya Maya is a luxurious sports apparel company that targets people who are not primarily choosing their sports apparel based on the price of the products. In this context, gamifying a process that is supported by a storyline with intrinsic motivators (like supporting sustainability) should result in increased engagement with the brand. Therefore, the main research questions of this thesis are:

- R1: Will including a gamified process of doing sports on the Maya Maya website in the name of being more sustainable increase customer engagement?
 - R1.1: If so, to which extent?
 - R1.2: If not, which are the reasons for failure?

The aim of the thesis is to find out if gamifying the process of doing sports in the name of being more sustainable will have an effect on the customers of Maya Maya and bring

² European Union

increased engagement be it in the form of web visits or web conversions to (www.mayamaya.ch).

The thesis methodology is mainly divided into two parts: theoretical and empirical. The first part is theoretical and it is based on secondary research into relevant scientific and professional literature. Additionally, case studies are laid out for increased clarity on the subjects of gamification and sustainability. In the second, empirical part of my thesis I used the access granted to the Maya Maya website in order to implement and test my gamification idea. Through a management software called Odoo, I created a gamified process on a new webpage made for the purpose of the thesis. The webpage was connected to an application called Strava which allowed me to measure the engagement of the participants in the gamified process. At the end, an analysis of the results is presented.

In the first chapter, I explain games and gamification, how they are classified and why that is important, the impacts of gamification on the motivation of consumers, and implementation processes and methodologies for gamifying. Additionally, I present a combined method for the implementation of gamification which will be used for the purpose of this thesis. In the second chapter, I get into the subject of sustainability and how important it is in business. Furthermore, I explain green gamification, its impact, and practical examples of it. The third chapter holds the clothing and textile industry overview focusing on their sustainability practices. In it, I explain the impact it has on the environment and how the EU is planning on tackling the problem. In the fourth chapter, gamification is explained through the prism of increasing customer engagement and examples of how that works in practice. Finally, in the fifth chapter, the practical part of the thesis is explained implementing the gamified process on Maya Maya's website and analyzing the results.

1 GAMIFICATION AND ITS IMPACT ON CONSUMERS' MOTIVATION

In this chapter, I will do an overview of what gamification is according to the existing literature, which are the beginnings of gamification, the connection between games and gamification, how does gamification impact the behaviour of customers, methodologies for implementation of a gamified process, and presentation of a combined method that suits the needs of the thesis.

1.1 Games and Gamification

Gamification is the application of game features, mainly video game elements, into a nongame context for the purpose of promoting motivation and engagement in learning (Alsawaier, 2018b). Another principal definition of gamification is "Gamification is the use of game design elements in non-game contexts" constructed by (Deterding, Khaled, Nacke, & Dixon, 2011). It uses the latest innovations from game design, loyalty programs, and behavioural economics to assist organizations in fighting the battle for the attention and loyalty of the users (Moise, 2013). In Deloitte's Tech Trends Report in 2013, they said "Gamification... can tap into the same human instincts that have led to centuries of passionate competition and engagement – our innate desire to learn, to improve ourselves, to overcome obstacles, and to win" (Deloitte, 2013).

However, contrary to popular belief, gamification is not a process that will miraculously improve the engagement and experiences of consumers. Many gamified applications fail to meet their objectives due to poor design or using only very basic game elements. Furthermore, even those game elements and mechanics can be poorly executed which can result in opposite effects on the customers (Laskowski, 2013).

To properly execute and implement a gamification, knowledge of the basics is needed. At the base of gamification, are games. Games are defined as recreational activities that are characterized by organized play, competition, two or more sides, agreed-upon rules, and criteria for winning or losing (Roberts, Arth, & Bush, 1959). With that in mind, we can say that games have been around since ancient times and people were entertaining themselves through many different types of games. In the book "*Homo Ludens*" the author Johan Huizinga starts the chapter "*Nature and significance of play as a cultural phenomenon*" with the following words: "*Play is older than culture, for culture, however inadequately defined, always presupposes human society, and animals have not waited for man to teach them playing...*"

According to Huizinga, games were the primary condition in human cultures and the starting point for later complex human activities among which language, art, law, war, philosophy, etc. (Huizinga, 1949). In prehistoric and ancient times, gaming tools were created out of specific bones like the Talus bone. These types of games are the early version of today's dice games or knucklebones games (Koerper & Whitney-Desautels, 1999). Possibly the earliest gaming tokens were discovered in a 5000-year-old burial in Turkey during the excavation of early Bronze Age graves. The 49 small stones sculptured in different shapes, with different colors were discovered in a burial at Başur Höyük, a province in Turkey (Lorenzi, 2013).

That being said, it is obvious that games were a part of human societies and cultures since a long time ago. In 1910, the concept of gamification didn't exist yet, but some elements of it were being used by companies in their selling strategies. Kellogg's cereals started offering a prize with every two boxes, and afterward "Cracker Jack" added prizes inside of every box which was an instant hit with the consumers. The element of gamification included in these first attempts was serving fun to the customers along with the products they're purchasing (McCormick, 2013). Of course, what today is known as gamification is far from that small fun element given with the products.

As the development of video games progressed, a genre of games was born highly connected with gamification - MUD³. Roy Trubshaw, a student at Essex University created a MUD game in 1979, which was not the first one of that type but made an enormous impact on the industry. Richard Bartle took over the game and upgraded it so much that from a simple interactive game, it became interactive fiction with a very important part that signifies games and gamification - a beautifully written story. (Cox, 1999)

Nonetheless, the first mentions of the word "gamification" date back to 2008 and it originated in the digital media industry. This means that gamification as a concept and industry is still in the early stages of development.

1.1.1 Classification of games and their connection to gamification

Games are at the basis of gamification. There are different methods of classifying games which then become parts of gamifications. According to this, one classification of games is the following: (1) physical skill, (2) strategy, and (3) chance. (Roberts, Arth, & Bush, 1959). Roberts et al. state that although physical games must involve physical skill, they can also involve chance or strategy. On the other hand, in games of strategy, the physical skill might be absent but chance may be involved.

Jörg Bewersdorff in his paper "*Luck, Logic, and White Lies: The Mathematics of Games*" (The Uncertainty of Games, 2005) classifies games according to the level of uncertainty they challenge the players with. Bewersdorff makes a point that even though the rules of the game stay the same, the players are still motivated to play it over and over again. He attributes this to the level of uncertainty that all games possess which grants players with the possibility of a different outcome each time they play. Exactly that is what Bewersdorff points out as "*what keeps things entertaining and generates excitement*". From all this, the following classification is presented:

- 1. Games that function on the mechanism of chance
- 2. Games that function on the mechanism of combinatorics
- 3. Games that function on the mechanism of each player having a different stage of information

Games of chance are those that are influenced not only by the decisions of the participants but by random influences likewise. An example of this is throwing the dice or shuffling the cards. Games in which the players have a large number of possibilities that can result in an enormous number of combinations are based on the mechanism of combinatorics. Examples of this group are chess, reversi, checkers, etc. In the third group of uncertainty, the players have different information about the game at the moment. An example of this is poker; the

³ Multi-User Dungeons

players base their decisions solely on their own cards without knowing the other participants' cards. (The Uncertainty of Games, 2005)

Perhaps one of the most famous categorizations of games was made by the French philosopher Roger Caillois. He classifies games into four different categories: Agôn (competition), Alea (chance), Mimicry (imitation-role playing), Ilinx (vertigo) (Caillois, 1958).

All of these game classifications are the root of which gamifications are created. What makes a gamification what it is, it's all the game elements, game mechanics, and game designs. When it comes to game design in gamifications, video games are the root of all inspiration. In fact, some authors are arguing that one of the biggest issues with gamification practices is the limited number of game design elements that designers have to choose from, as well as failing to take into account fully how these habitual design practices actually impact users (Rapp, 2017).

In the book "Understanding Video Games: The Essential Introduction" the authors comment on Caillouis' game classification and its applicability to video games (Smith, Egenfeldt-Nielsen, & Pajares Tosca, 2013). Smith et al. argue that although Caillouis' classification of games is among the most cited, it might be too arbitrary for video games. Many times, a game falls within multiple categories of the classification. Smith et al. point out Fifa 12 where elements of competition, chance, and simulation of sports make it fall under three of four categories of the classification (Smith, Egenfeldt-Nielsen, & Pajares Tosca, 2013).

That being said, classifying video games is not an easy task for scholars. Video games seem to break many of the previously set game boundaries. The easiest and most common classification made about video games is according to genres. This subject is deeply explained in the book "*Integrating Video Game Research and Practice in Library and Information Science*" by Jacob A. Ratliff. He points out that although classifying video games by genre is both common and somewhat helpful, it is not the best way. He states that looking by the genre into books and movies makes sense since those types of mediums are defined by the narrative inside of them. Video games, on the other hand, can be also determined by factors other than the narrative such as the video angle, the purpose of the game, or even the number of players in the game (Ratliff, 2015). Within the genre classification, the following genres are mentioned:

- RPGs⁴ generally have a very strong narrative where the player starts weak, and then by leveling up reaches a certain power in the video game. Generally, RPGs are considered to be a fantasy genre, however, that is not always the case for example in Grand Theft Auto.
- Action/Adventure these games can have a narrative, but not necessarily. There is a progression through leveling here too. A good example of this genre is Super Mario

⁴ Role-Playing Games

where the narrative is quite simple-to save the princess- but the process in between is what makes the game interesting.

- Platformers are games that are categorized not by the narrative, but by how the game is played. They are usually 2-D and are considered to be a subgenre of the previous genre.
- Racing games in which there can be a narrative but it is not crucial to the game playing. A good example of this is Need for Speed.
- Fighting although many games have elements of fighting, the games that fall within this genre are generally one versus one fights. These games are also generally 2-D.
- FPS⁵ games that are defined by the angle of the camera and not by the narrative. The angle of the camera mimics the point of view of the person playing the game. Usually, these games involve shooting as stated in the name but not necessarily (Ratliff, 2015).

The reason why these video game classifications are important to be mentioned is that they are direct sources out of which gamification is created. For instance, RPGs are offering strong narratives and leveling up, or FPSs are defining the angle of the viewpoint in gamifications.

1.2 Impact of Gamification on Consumers' Behaviour

Consumers' motivation is what makes consumers purchase specific products, and it's tightly connected to Maslow's hierarchy of needs. In the 1943 paper "A theory of human motivation" by Abraham Maslow, he explains the basics of people's needs and that has been used quite a lot in understanding consumers' motivations.

Taking into account Maslow's hierarchy, the motivation of consumers can be linked to the importance of their needs, as depicted in Figure 1. The basic needs are physiological needs like food, shelter, safety. Once those are satisfied, people start paying attention to higher-level needs including social ones like the need for relationships and love, the need for status and recognition, and the self-actualization needs for self-fulfillment. Maslow's idea was that if the needs on the basic levels are not fulfilled, people will not seek to fulfill the higher-level needs (Maslow, 1943).

⁵ First Person Shooter

Figure 1: Maslow's Hierarchy of Needs



Source: McLeod (2020).

From this, where the fulfillment rewards are generally low like for example with buying simple groceries, the motivation levels are relatively low without complex decision-making behaviour. When buying an "advanced" product like for example a car or a house, the decision-making process is much more complex and consumers' motivation is impacted by a lot more factors. In this context, consumers might do extensive research, consider multiple alternative solutions, change their minds, etc.

Here the question *does gamification influences the consumers' motivation* emerges. The main idea is that by implementing game elements into real-world instances, the consumers display motivating behaviours. Gamification has been applied to many fields until now, from Duolingo in education (Huynh, Lida, & Zuo, 2016), "Testing is healthy" (Zhang et al. 2017) in health, to Opower in environmental protection (Oracle, 2020), and much more. Empirically, the majority of studies on the subject indicate a positive effect of gamification on motivation (Sailer, Hense, Mayr, & Mandl, 2017).

In an article titled "Understanding Gamification of Consumer Experiences", the authors through specific examples explain how gamification can impact consumers' experiences and motivation (Robson, Plangger, Kietzmann, McCarthy, & Pitt, 2014). Robson et al. use an

MDE framework which stands for *Mechanics* (instructions of a game), *Dynamics* (interpersonal results of following, bending, or breaking the mechanics), *Emotions* (affective states that occur when players participate in the game). Furthermore, the authors state that gamified experiences can be defined by using two fundamental dimensions: (1) player participation which describes the extent to which players are involved passively or actively contribute, (2) player connection which describes the type of environmental relationship that unites the player with the experience.

Figure 2: Types of player experiences

Absorbed

I

Observation Players are observers who passively absorb and consume an experience. They remain outside of it and have no effect on it.	Apprenticeship Players are apprentices who are actively involved/engrossed in an experience, but are not immersed in the action.			
Spectatorship	Performance			
Players are spectators who are passively involved in an experience and immersed in the action. They become part of the experience, but do not directly affect it.	Players are performers who actively and directly contribute to an experience. When they are immersed in the action, they suspend or escape other parts of their lives.			

Active

Passive

Immersed

Source: Robson, Plangger, Kietzmann, McCarthy & Pitt (2014).

The beforehand explained dimensions create the four types of experiences which are depicted in Figure 2. Robson et al. argue that most traditional experiences fall within one of these four quadrants.

For instance, if we take a traditional game of football. During important matches, there are a lot of *observers* through TVs, the internet, etc. They are passively involved because they

are only observing the match from afar. The people that are present in person in the audience are *spectators* since they are still passively observing the match but they are immersed in the action. They cheer, boo, etc. People who are hoping that one day they will also play football on this level are *apprentices*. They are actively absorbing the experience, but are not immersed in the action. And finally, the football players themselves are the *performers*. They are the ones that are actively participating in the match. These types of player experiences are relevant also further in the thesis where the actual gamified feature is practically applied. All four types of players that fall within these four types of player experiences are motivated by different things. It is crucial to know which type of player experience the customers fall within to know how to construct the gamified process.

1.3 Gamification implementation process and methodologies

1.3.1 The GameLog Model

The GameLog Model was designed for implementing a gamification in a business process in the material handling field (Klevers, Sailer, & Günther, 2016). Klevers et al. argue that typical game design models are failing to meet the requirements when it comes to gamification since they are focused on developing holistic games. Hence, they developed the GameLog Model which has three phases:

- 1. Analysis and exploration
- 2. Design and realization
- 3. Evaluation and reflection

The model depicted in Figure 3 will later be used to implement the Maya Maya gamified feature on the company's website.

Within the three main phases of the model, there are several under-phases. In the Analysis and exploration phase, one of the most important things is the problem description phase. Here, the problem that the gamification is seeking to solve has to be distinctively described. Based on that, the goals should be defined, both superior goals which are directly related to the problem, and the behavioural goals which target the entities which the gamification is being implied for. Afterward, analysis of the basic conditions follows which entails the question "How can the gamification application be integrated into the existing work context without changing the process execution?" (Klevers, Sailer, & Günther, 2016).

In the second phase, *Design and Realization*, the game mechanics and game element selection is done. Game mechanics refer to the mechanisms that are supposed to trigger the previously defined goals and push the participants of the gamification towards the selected behavioural directions (competitions, collaboration, character development, etc.).

Figure 3: GameLog Model: Implementation model for the gamification of business processes



Source: Klevers, Sailer & Günther (2016).

Game elements define then the basics of the gameplay. In the realization section of this phase, the game framework is defined by the rules of the game and the overall theme. Technics selection is about the technical hardware and software creation of the gamification. After all this, implementation takes place.

The third phase, Evaluation and Reflection is a sort of a re-design loop that aims to take feedback of the implemented gamification and improve it continuously (Klevers, Sailer, & Günther, 2016).

1.3.2 Conceptual Model for Gamification of e-Learning Environments

In this sub-chapter, I will take a closer look into a conceptual model for gamification of e-Learning environments developed by Ana Klock, Lucas Cunha, Mayco Carvalho, Brayan Rosa, Andressa Anton, and Isabela Gasparini. This conceptual model depicted in Figure 4 was created to assist in implementing gamification in new or existing e-learning systems. The model defines (1) who?, (2) why?, (3) how?, and, (4) what?.

"Who?" is used to identify the actors that will be a part of the gamified process. For instance, in terms of e-Learning systems, the actors are the students and the teachers. The main actors are the students since the gamification is created to target them. "Why?" is defining the

possible behaviours that can be improved by the gamified feature."How?" is identifying the implemented game elements. "What?" is representing the data included in the process.



Figure 4: The four dimensions of the conceptual method

Source: Klock et al. (2015).

Klock et al. implemented their conceptual model in adaptive open-source learning environment AdaptWeb®.

1.3.3 Seven phases for designing a gamification

In the paper "How to gamify? A method for designing gamification", Morschheuser, Werder, Hamari, and Abe interviewed 25 experts on the subject of gamification and developed a method for designing a gamification. 10 additional experts evaluated the method as comprehensive, complete, and practical (Morschheuser, Werder, Hamari, & Abe, 2017).

The activities of the developed method can be divided into 7 phases:

Project preparation: all the activities that should be done before starting with the project. It is common to start with the identification of problems that should be solved or improved by gamification. Furthermore, it's necessary to have goals by which the success of the gamification can be measured. These goals should be focused on motivating the consumers rather than fulfilling business objectives.

Analysis: activities that identify the knowledge of users, processes, and the project overall. It is necessary to gain deep knowledge about the target customers, and the characteristics of the system that will be gamified. Morschheuser et al. mention things like observations,

measurements of user behaviour, surveys, like some of the activities that might help with proper analysis. The users can be defined by a lot of different criteria like geographical, demographical, motivational factors. A common practice is to develop customer personas and target them according to those classifications.

Ideation: activities with which ideas for gamification design are gathered. Using known patterns from games like rewards, points, badges, leaderboards, narratives, like building blocks. The key challenge is to use game elements that match the previously identified user personas and goals. To achieve this, it is typical to do creative brainstorming and come up with as many ideas as possible. Known frameworks can be used like for instance the Octalysis Framework (Chou, 2021). It is preferred to have user involvement in the ideation phase.

Design of prototypes: designing the gamification elements and creating prototypes. In this phase, playable prototypes should be developed. The prototypes need to be tested and improved if necessary. Usually, at this phase, experts like developers are briefed on how to create the prototypes.

Implementation: implementing the gamified approach. Essentially, it is about airing pilot gamification. This is a continuation of the prototype phase. During this phase, continuous user and playtesting are required. To implement the gamified approach, one can use outside developers or the inside team of the company.

Evaluation: evaluating and testing the gamified approach. The aim in this phase is to discover if the gamified approach meets the defined objectives. Methods like surveys, A/B testing, and impact studies can be used to achieve the evaluation. Playtesting is also required, and it refers to the observation of users while they perform the tasks in the gamified approach. According to the study, this has been reported to be significantly more effective than interviews and surveys.

Monitoring: monitoring the gamified approach after its release. Successful gamification doesn't have an end. Experts suggest having a monitoring phase wherein at regular intervals the gamification will be monitored and a list of improvements will be created.

1.3.4 Combined method for implementation of gamified feature on an eCommerce website

The previously mentioned models are not completely fit to be used for implementing a gamified feature on an eCommerce website because they are created for different purposes and industries. Many of the practices, for instance, in the eLearning industry do not apply to this thesis. Considering that the existing literature does not have a model that can be completely fitted with the need of this thesis, I will use a combination of the existing models to create one that I will use in the later chapters of this thesis.

The most important things when implementing a gamified feature on an eCommerce website are that it has to be in line with the already existing brand and that the management has to approve all the decisions surrounding the narrative, the aesthetics, the prizes of the gamification. This is the biggest thing missing from the existing models - taking into account management's decisions which take the gamified feature in different directions.

Keeping that in mind, the proposed steps in the combined model are:

- 1. Ideation and presentation to the management
- 2. Analysis and exploration
- 3. Game mechanics (Who and How)
- 4. Implementation
- 5. Evaluation and monitoring

Ideation and presentation to the management

Ideation is a long process that takes into account the brand that the gamified feature is created for, the customers and their customer personas, and the brand image. In the existing methods previously explained, the biggest deficiency was not taking into account the managements' voice. The first general idea of the gamified feature is created here keeping in mind the customers' personas and using elements that those groups would respond well to. Presentation to the management of the brand is another key element in this phase. Their feedback is what will shape the following steps of the implementation, as well as the results of the whole project.

Analysis and exploration

Once the management agrees with a final idea, actions towards further analyzing the customer behaviour are needed. Analytics are used from the previous customer engagements with the brand to help the process. Description of the problem and how the gamified feature will solve it are defined. Based on this, the goals of the gamified feature are clearly pointed out.

Game mechanics (Who and How)

In this phase, first, the "Who" is identified. These are the actors that will be participating in the gamified process. What role do the customers have, what role does the brand have? Additionally, the "How" is defined in terms of which game elements will be used in the gamified feature. For instance, badges, levels, prizes, and so on.

Implementation

The implementation phase describes the technical aspect of implementing the gamified feature on the website itself. It defines the process step by step, the progress, and the problems that might arise from it. Here additional help from developers, for instance, is described as well.

Evaluation and Monitoring

Once the implementation is finished and the gamified feature is available to the customers, it has to be evaluated and monitored. According to that, it might be slightly edited to fit the real-life results. Data from the gamified features are recorded daily, which is again used to conclude how and where can the gamified feature be better for the customers.

2 SUSTAINABILITY AND GREEN GAMIFICATION

In this second chapter, I will explain the importance of sustainability in a business environment, the definition and impact of green gamification, and offer three examples of green gamified processes - how they achieved what this thesis is trying to achieve.

2.1 Importance of Sustainability in Business

The world now more than ever is impacted by our actions. It is the actions of its citizens and especially of the businesses that currently prevail that play a major role. Global problems like climate crisis, the need for clean energy, wildlife protection, rainforest protection are all deteriorating. The Earth has limited resources, a lot of which are non-renewable, and we as consumers are taking much more than we are contributing. This leads to many problems that will only increase with time, for example, worsening global warming and destroying entire ecosystems. That is one of the main reasons why sustainability as a concept is increasingly introduced into every sphere of our existence. Businesses are not devoid of it either. As a consequence, the processes of production and consumption have to be changed. There is an urgent need for businesses to include sustainable practices within all of their processes. All of these aspects lead to the coining of the term "*Business sustainability*" defined as a company's or an organization's efforts to manage (optimize and minimize) its impact on Earth's life and eco-systems within its whole business network (Svensson & Wagner, 2012).

In 2017, the United Nations DESA⁶ published their "*World population prospects*" report which had an overview of the past and projections of the future of the world in terms of population. According to the report, the world in 2017 had 1 billion more inhabitants than just 12 years before. The population growth was approximated to 83 million people annually. With this rate, the projection for 2050 is that the population number will reach 9.8 billion (Department of Economic and Social Affairs: Population Division , 2017). This will have an enormous impact on the world overall, and on businesses as well. Production needs are

⁶ Department of economic and social affairs

expected to reach new peaks to fit this rapid growth, but at the same time, new levels of depletion of the natural resources will occur along with the increase in pollution. Taking into account this future production increase, businesses must also think about the environmental impact it will bring. Based on these projections of the future, together with the comprehension of the limitations of natural resources the world is facing, an increasing amount of attention is given to a new model of development - sustainable development. (Renko, 2018).

In the literature, there are many definitions about sustainable development, but one of the most quoted ones belongs to the World Commission on Environment and Development report in 1987 where it's stated that sustainable development is a development that "*meets the needs of the present without compromising the ability of future generations to meet their own needs*" (Brundtland Commission, 1987). Sustainability is necessary in three main areas, also known as the "three pillars of sustainability" depicted in Figure 5. The first one is environmental sustainability, which refers to protecting the environment and having responsibility towards it. The second one is economic sustainability, which cares about economic capacity and development, and the third one is social sustainability, which entails social solidarity and justice (Renko, 2018).





Source: Purvis, Mao & Robinson (2019).

Sustainable development revolves around the three pillars of sustainability with the main goal of trying to define them and reach a balance between all of them. In UNEP⁷'s publication Industry and Environment, Kusima says: '*In any company, good economic results and financial resources are essential to developing environmental and social responsibilities. If a company must be reorganized for financial reasons, the project of building an environmental management system will definitely be postponed. And vice versa: acting in a responsible way has to be profitable, either directly or indirectly, or motivation is weak' (Kuisma, 2003). From all this, the deduction is that sustainable development is nevertheless a development and it still has to be profitable for businesses. How those profits are realized has to take into consideration environmental and social factors.*

2.1.1 United Nations' SDG⁸

Efforts to achieve a higher level of sustainability and sustainable development in all spheres of life are done by the United Nations. In 2015, The 2030 Agenda for Sustainable Development (United Nations, 2015) was adopted by the United Nations and it consists of an outline for sustainable development on a global level. Within this agenda, there are 17 sustainable development goals (SDGs) which put an accent on different categories where sustainable development is necessary. The United Nations recognizes that all of these goals are entangled and must go hand-in-hand with each other in order to improve the future of life on Earth.

The SDGc are as follows: (1) No poverty, (2) Zero hunger, (3) Good health and well-being, (4) Quality education, (5) Gender equality, (6) Clean water and sanitation, (7) Affordable and clean energy, (8) Decent work and economic growth, (9) Industry, innovation and infrastructure, (10) Reduced inequalities, (11) Sustainable cities and communities, (12) Responsible consumption and production, (13) Climate action, (14) Life below water, (15) Life on land, (16) Peace, justice, and strong institutions, (17) Partnership for the goals (United Nations: DESA, n.d).

As previously stated, with the population growth, businesses will have to grow too in order to meet the increasing demand. Even at the present, businesses through their existence can affect multiple goals on a local level, which will therefor impact the goals on a macro level too. No matter the industry, all companies can only gain from having resilient communities, reliable sources of natural resources, educated and healthy people in their workforce, all of which will inevitably help with generating capital and value for the shareholders in the long term (EY Global, 2017).

Furthermore, with the depletion of natural resources, the supply chains of many businesses will be affected. A company will not be able to create if there are no natural, social, financial,

⁷ United Nations Environment Programme

⁸ Sustainable Development Goals

or manufactured resources to support them. Every one of the SDGs already poses a certain risk to companies, and these risks are likely to grow over time if the proper actions are not taken in the present. Efforts towards business sustainability should be seen as dynamic to change from a past condition to the present and then to the future. In a true sense, business sustainability should be transformative (Svensson & Wagner, 2012).

2.2 Definition and Impact of Green Gamification

Gamification has been successfully used in very important industries such as healthcare, education, business, etc. Another crucial field in which gamification is becoming increasingly popular is sustainability. Climate change is the defining issue of our time – and we are at a defining moment (Guterres, 2018). One of the biggest problems with sustainable development in all spheres is the failure of the population to believe the environmental issues. For this problem, an increase of awareness and knowledge about these subjects is necessary, mainly through improved communication that can alter people's behaviours and attitudes. The alteration can be influenced through the enjoyment of learning and interactivity. The enjoyment in this context is not merely referring to positive emotions, but strongly experienced emotions. We as humans are able to thoroughly enjoy a story even if it's heart-breaking (Kronisch, 2019). Additionally, people are given the possibility to interact directly with a given problem of this type. Kronisch defines interactivity as: "Interactivity is the interaction between a user and an application that is flexible enough to a) respond to the user's input in real-time, and b) continuously alter options based on previous input, to facilitate smooth two-way communication." The last thing that has to be taken into account is entertainment or fun as a motivator for people to want to be interactive. The thing that combines all of these conditions is games. In the fast-paced, technology-dominated reality we're living in, it's getting harder and harder to grab the attention of consumers. Gamification can grab the attention of consumers, continuously motivate them to engage, and influence their behaviour and attitudes. An example of an upcoming app that tries to achieve all that's previously mentioned is GreenWallet. It's an ethical marketplace where you can connect with ethical businesses and shop sustainably. The app has previously vetted merchants and offers promotions and deals.

Additionally, the app has Green Coins which you can collect via purchasing deals. For every pound spent, you're earning one Green Coin. Moreover, if you're spreading the word on Instagram about your favorite deals or merchants, you will earn additional Green Coins from every like. With every purchase, the GreenWallet team is planting a tree. You can track your carbon footprint, own a bio-degradable debit card, set a green budget so you spend rationally, and more functionalities (Green Wallet, 2021). Essentially, every time you spend money, you're casting a vote for the kind of world you want (Lappé, 2021). All of these things are combining gamification with sustainability, which can be defined as green gamification or environmental gamification. Green gamification is gamification that is used to increase and sustain the interest of the users and to promote specific behaviours in terms of environmental

sustainability (Akbulut & Yıldırım, 2019). Or in other words, green gamification is using game elements to engage people and influence their behaviours and attitudes towards sustainability issues. The positive impact of such green gamifications has been observed in countless cases. PepsiCo as a world-renowned company has extensive programs for recycling aimed at young children. Through contests and prizes, the company is motivating the new generations to be responsible for the planet. (PepsiCo, 2021) Through green gamification, PepsiCo has recycled over 59 million beverage bottles and cans (Szaky, 2017). The collective impact that all of the green gamification efforts have over the world must be significant to a certain extent. What is more essential, is targeting the new generations and influencing their behaviours and attitudes, as they are the future of the planet and their perceptions of sustainability are extremely relevant in how the climate crisis will evolve in the future.

2.3 Examples of Green Gamified Processes

In this chapter, I present examples of gamified processes which have sustainability as a goal. These examples were used as an inspiration for the gamified feature of this thesis.

2.3.1 Opower

Opower is an energy-saving gamification that has been a big success and it's mentioned a lot in the context of green gamification. Opower (Oracle at present) is a company that specializes in using AI tech and behavioural science methodology into motivating customers to learn and do more in terms of being sustainable (Oracle, 2021). Opower itself is not a utility company but it partners with utility companies to encourage consumers to use energy responsibly. They are doing this is by using gamification; adding awards, leader boards, and badges which make households compete both with themselves and with their neighbors (Shane, 2013). Opower does this through Home Energy Reports that initially had two principal issues: Action Steps Module that provided information tailored to each household with strategies on energy savings, and Social Comparison Module that gives details on the energy consumption of the household and compares it to the nearest neighboring houses of comparable size (Allcott, 2009). The data display is showing how much you spent, how much the efficient neighbors spent, and how much all neighbors spent. It additionally compares the data to last month's results and gives you your overall efficiency standing (Great, Good, Below Average) as can be seen in Figure 6.

Figure 6: Home Energy Reports: Social Comparison Module.





In 2020, Oracle Utilities Opower completely reimagined the Home Energy Reports adding new energy insights and new applied behavioural science. Since 2007 when the Home Energy Reports pioneered on the market, nearly a billion reports have been produced. Accumulatively, the reports have reported saving over 25 terawatt-hours of energy which is enough to power every household in Dallas, Texas for 3.5 years (Oracle, 2020).

2.3.2 RecycleBank

RecycleBank is a company that gamifies recycling since 2004. Their goal is to create wastefree communities by encouraging people to recycle as much as they can. In return, they offer points that are redeemable for real products. City governments are partnering with RecycleBank and the people from those communities can participate in the gamification. Users choose a green action they want to get rewarded for and once they have a confirmation of it, RecycleBank awards them a point that can be used at local or national retailers or online (RecycleBanks, 2021). The rewards can be also donated to Recyclebank's Green Schools Programme and are then converted into cash grants. Over £200.000 have been donated to different schools since 2007 through this program. UK⁹ residents made 102 million points in 2012, got 300.000 rewards, and saved almost £2 million (Beavis, 2013).

2.3.3 Strava

An essential part of this thesis is the Strava app, which in the practical part will be used as a measuring tool in the gamified feature on the Maya Maya website. However, Strava is not only great at measuring, but it is a gamification itself. Strava is a social app for athletes which tracks and compares the results of the physical activities in many sports like running, cycling, hiking, triathlons, etc (Strava, n.d). The app uses many of the usual gamifying elements like

⁹ United Kingdom

leaderboards, weekly progress, time/kilometers/elevation comparison, badges, challenges, etc. But since it's promoting physical activity and cycling especially, it's considered to be a sustainable app as well. The reason for that is that commuters are using Strava too, and the app collects data in the process. Strava has millions of users, and an abundance of data on how people get to work, how much time it takes them, the routes they choose, etc. This was noticed by many transport companies and more and more of them are requesting Strava's data. For these purposes, Strava created a new app called Strava Metro (Williams, 2017). Since Strava owns the largest database of human-powered transport information, they use it for helping urban planners, governments, and safe-infrastructure advocated to be up to date. Strava Metro uses this data with anonymity and shares it with entities free of charge. With this data, governments can observe and analyse the behaviour of the commuters and come up with solutions how to make it safer, easier, and faster for them so they keep using the human-powered type of transportation increasing sustainability (Strava Metro, n.d).

3 OVERVIEW OF THE SUSTAINABILITY OF CLOTHING AND TEXTILE INDUSTRY

In the following chapter, I will dive into the environmental impact of the clothing and textile industry and the sustainable practices that this industry is practicing or trying to implement in the future.

3.1 Environmental Impact of Clothing and Textile Industry

The global apparel market is one of the biggest and fastest-growing markets in the world. In 2019, the EU reported that the amount of clothes bought within the union per person has increased by 40% in just a few decades. The main reason for this is the drop in prices and the growing speed with which the clothes are delivered to the customers (European Parliament, 2019). In 2020 the apparel market was valued at \$1.5 trillion, and the projections for 2025 are that it will reach a staggering \$2.25 trillion in value (Shahbandeh, 2021). The demand for shoes and clothes is on the rise everywhere in the world. Within the apparel industry, four main categories are defined and those are womenswear, menswear, sportswear, and childrenswear. The top-selling category is womenswear with a \$187 billion value in 2020, and it's followed by sportswear with \$185.2 billion (Shahbandeh, 2021). In 2019, the three top-selling apparel/footwear retailing companies were TJX Cos, Inditex, and H&M (Statista, 2019). All of those companies are considered to be fast fashion producers of apparel. They are companies that use globalization to produce clothes at significantly low prices that make the clothes cheap to buy and disposable. Fast fashion is the clothing equivalent of fast food (Claudio, 2007). The clothing industry accounts for between 2% and 10% of the overall environmental impact of EU consumption. This impact is the most felt in third-world countries as many of the fast fashion companies produce their clothes abroad (European Parliament, 2019).

The textile industry uses the majority of chemicals in a process called "wet processing" which entails the washing, dyeing, printing, and finishing of fabrics. During these processes, as much as 200 tons of water is used per metric ton of produced textiles (Chowdhury, 2014). A lot of the chemicals used in these processes are not hazardous, but since the industry is so big the small portion of hazardous materials is actually a very significant number. The textile industry is harmful to the environment in many different ways, although the biggest one is water usage. Often, wastewaters are discharged, polluting the waters of the world and affecting the land with harmful PH, high temperatures, and chemicals, see Figure 7.

Name of toxic chemical	Used as/in
Tri-butyl tin oxide (TBTO)	Biocide on hosiery and fabrics
Non-ionic surfactants	Detergents in textile preparation and dyeing
Cationic surfactants	Textile dyeing and finishing
Sodium chloride	Dyeing of cotton textiles
Sodium sulfate	Dyeing of cotton textiles
Copper	Dyeing of cotton and polyamide; in its elemental, non-complexed form, it is toxic
Cyanide	Anti-caking agent in salt

Figure 7: Popular and toxic textile chemicals and their fields of application

Source: Chowdhury (2014).

Other ways in which the industry is harmful are air pollution, chemical usage, consumption of energy, waste generation, transportation, packaging materials, etc. This is an intricate problem considering the fact that companies have complex retail chains. Some businesses are only involved in the production, whereas others are involved in multiple stages of the chain from production to selling the garments. For these reasons, the term cleaner production emerged in 1989 and was first introduced by the United Nations Environment Programme (UNEP). Cleaner production is a "preventive environmental management strategy, which promotes eliminating waste before it is created to systematically reduce overall pollution generation, and improve efficiencies of resource use" (UNEP, 2001). UNEP has been pushing companies, governments, and academia to commit to cleaner production through their International Declaration on Cleaner Products. They are doing this through their "Implementation guidelines" which consist of three documents for governments, companies, and facilitating organizations that give more than 300 suggestions for cleaner production in the processes of their working (UNEP, 2001). Standards that help with the subject of clean productions are in place such as ISO 9000 and ISO 14000. ISO 9000 is a standard for management that has guidelines for increasing business efficiency and customer satisfaction, while ISO 14000 is a standard for environmental management and minimizing the negative effect of companies' work on the environment through laws, regulations, etc. Research supports the legitimacy of ISO 9000 and ISO 14000 in improving awareness of sustainable development practices in areas like improvement of quality and optimization of performance (Pawliczek, 2013).

3.2 Sustainable Practices in the Clothing and Textile Industry

The environmental impact of the clothing and textile industry is vast, and companies are becoming more aware of their individual impact on the world. Moreover, governments and regulatory bodies are including more rules by which businesses have to abide. For instance, EPA¹⁰ is an independent executive agency in charge of environmental protection matters in the United States. Explicitly towards the textile manufacturing sector, EPA has laws and regulations such as (1) Greenhouse gas reporting program, (2) National emissions standards for hazardous air pollutants (NESHAP), (3) Fabric printing, coating, and dyeing standards, (4) Industrial cooling towers standards, (5) Leather tanning and finishing operations standards. Furthermore, they have a guide for hazardous waste requirements, water pollution, and other standards (EPA, 2021). International organizations have regulations and standards as well, such as the OECD.¹¹ Since 1961, OECD functions as an international organization that shapes policies for prosperity, equality, opportunity, and well-being in collaboration with governments from 37 member states (OECD, 2021). In 2009, OECD created the Declaration on Green Growth which committed the member countries to put efforts towards green growth strategies within their operating. In 2011, the Green Growth Strategy was adopted by 34 countries, which are today 47 in total. The Green Growth Strategy gives recommendations and tools for measurement of effort towards economic development while not harming the natural ecosystems we rely on (OECD, 2011).

3.2.1 EU's circular economy plan

As part of the EU's "European Green Deal" which is a detailed action plan towards being the first climate-neutral continent is the EU's circular economy action plan (CEAP). The newest edition of the circular economy action plan was adopted in 2020, and it is considered to be one of the main building blocks of the European Green Deal (European Commission, 2020). The plans' main objective is that the EU will achieve climate neutrality by 2050. They are planning to achieve that through a series of regulations that target the entire life cycles of products. According to the European Parliament, a circular economy is "a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way,

¹⁰ Environmental Protection Agency

¹¹ Organisation for Economic Co-operation and Development

the life cycle of products is extended" (European Parliament, 2021). Essentially, circular economy means producing as little waste as possible in the life cycle of any product.

Considering that less than 1% of all the world's textiles are being recycled, the EU aims to boost innovation towards sustainable and circular textiles, reusing textiles, regulating the fast fashion industry, and much more (European Commission, 2020).

4 INCREASING CUSTOMER ENGAGEMENT THROUGH GAMIFICATION

In this chapter, I will explain how gamification can increase customer engagement, and provide examples from real environments that achieved that.

Consumers are not merely satisfied with being given the passive role of a buyer anymore; they need an expansion of that experience. Therefore, companies are increasingly moving away from the traditional offerings and paying more attention to concepts like customer engagement and post-consumerism. Examples of these behaviours are leaving ratings for products in online marketplaces, boycotting firms that are believed to do harm, co-creating experiences and designs of products, and many more instances. The various customer activities and behaviours that go beyond that passive traditional role of a buyer is defined as customer engagement (Brodie, Hollebeek, & Conduit, 2016).

Many authors have been claiming the positive effects of gamification on motivation and engagement. In a peer-reviewed analysis on empirical gamification studies, from 24 reviewed studies, most of them gave positive results about the relationship between gamification and learners' engagement Hamari, Koivisto and Sarsa (Alsawaier, 2018a). Another review analysed 32 studies on utilizing digital gamification elements in a pedagogical environment and 20 studies showed positive results in terms of connecting gamification to higher levels of engagement and motivation. In the rest of the studies, there was no correlation between the engagement and the gamification elements Seaborn and Fels, 2015 (Alsawaier, 2018b). On the other side of the spectrum there have been some studies that produced negative or mixed results, however, those used either limited gamification features or made the game elements mandatory without a choice Leaning, Berkling & Thomas (Alsawaier, 2018b).

4.1 Engaging customers through gamification: real-life examples

In this subchapter, I will present three examples of successful gamifications that had positive outcomes in engaging the customers.

4.1.1 Heineken Star Player

In 2011, Heineken released the Star Player app which gamified the football-watching experience for people. The application also had a desktop version. The idea behind the project was to make the simple, passive football-watching experience for people exciting through a series of interactive activities. And this was in time for the Champions League as Heineken is the official sponsor of the league and they wanted to increase awareness of their brand among the fans of football.

Through the app, it was possible to become a part of a live social TV game experience which brought out the competitiveness in people right in their homes. In real-time as the games were unfolding, people were asked to predict things in the games like will the goal be made by the head or will they score in the next 20 seconds. The correct predictions were awarded points. The points could be earned also with trivia questions during the downtime. You could immediately see how you are doing in comparison to your friends in terms of points. It gave people an extra element of competitiveness and excitement when passively watching football matches (Percy, n.d).

In this context, Heineken displayed their sponsorship in a very innovative way. It is common for sponsors to just display their brand during the sports game, or run advertisements. Heineken took it to another level by creating an interactive way for viewers to participate in the matches they were watching. With this, they successfully engaged customers.

4.1.2 All eyes on S4 (Swisscom)

In May 2013, Swisscom, a telecommunications company from Switzerland, created a very fun gamification in the Zurich Main Station. The gamified process was the following: a CLP¹² billboard (Figure 8) was set up in the main station inviting people to keep their eyes fixated on the phone in the billboard for one hour to win it.

The campaign included fun distractions for the participants like people getting on fire next to them, a couple fighting, tourists asking for directions, motor bikers doing stunts, police dogs, and more. The purpose was to make the "staring contest" as hard as possible for the participants. The whole experience was very successful and it drew a big crowd of people that witnessed some funny tries to win the phone (Hermann, 2013).

¹² City-Light-Poster

The billboard even displayed a percentage of time that the participants passed. In the end, somebody succeeded to win the phone even with all the distractions.



Figure 8: All eyes on the S4

Source: Hermann (2013).

4.1.3 FoldIt Puzzle

A problem that scientists have been trying to figure out for 15 years has been gamified into an online video puzzle and solved by gamers. The problem that the scientists were trying to solve was deciphering a crystal structure of an AIDS-causing virus called Mason-Pfizer monkey virus (M-PMV). A collaboration between the University of Washington's Center for Game Science and the Biochemistry department produced an online puzzle called FoldIt. With a game-like interface, the puzzle was interesting enough for people from all over the world to compete in trying to figure out how the proteins fold. (WDSU News, 2011)

What scientists couldn't solve for 15 years, 240.000 players competing solved in a matter of weeks making a major breakthrough in the research. This is an example that gamification can be used in social examples helping bigger causes other than marketing products or making profits. (FoldIt, n.d)

From the examples above it can be seen how customer engagement through gamification helps with increasing awareness of the brand, encouraging customer loyalty, and increasing customer satisfaction. Even if the people that participated in the gamified examples above were not customers of the brands before, it is more likely that they will have a positive correlation with the brand in the future if they had fun participating in the gamified processes.

5 IMPLEMENTATION OF THE GAMIFIED PROCESS

In this final chapter, I will provide an overview of the Maya Maya brand, explain the process of implementation of the gamified process on the Maya Maya website, do an analysis of the data before and after implementation of the gamified process, discuss the limitations of the empirical data, and give my recommendations for further research.

5.1 Overview of the Maya Maya Brand

Maya Maya is a Swiss small to medium company for luxurious outdoor sportswear. Their story began in 1999 and since then they have been building their brand on authentic and powerful story-telling. Today, they have several flagship stores located throughout Europe, each forming strong local communities of outdoor enthusiasts. At the time of writing this thesis, Maya Maya has four physical stores located in Landquart (Switzerland), Brenner (Italy), Zagreb (Croatia), and Zsar (Finland). In addition to the physical stores, Maya Maya has an eCommerce store that earns separate revenue. This thesis will be connected to the eCommerce store only.

The mission of the company is to create products to preserve what they appreciate the mostthe planet Earth. They act in that manner locally and globally. The production of the garments is done with the least impact possible on nature. The vision of the brand is to become a cult brand with customers that live the brand. Maya Maya specializes in skiing, mountaineering, chill out, and running apparel. Annually, the brand achieves 1-5 million euros collectively from all stores and the eCommerce shop.

When it comes to sustainable practices, Maya Maya is trying to be as sustainable as possible by practicing several things. In the third chapter, the faults of the textile and fashion industries were presented as one of the biggest pollutants on our planet. Maya Maya is proactive in tackling these issues as a brand.

When it comes to *production*, they take the best performing materials from all around the world (US, Europe, Asia) and the assembling process happens in the place with the best know-how, preferably in Asia. The collections are unique and limited edition, which means that the assembling process is happening in very small or sampling workshops, as opposed to big mass production facilities. With this, the process of assembling is much more sustainable, dedicated, and precise. The products are very high-quality which means they have long lifespans. Additionally, Maya Maya has a repair policy where customers can send

their damaged clothes back to them and get them repaired even further prolonging the lifespan of the products. With this, Maya Maya directly contributes to lowering waste and energy consumption. Having long-lasting garments is the best policy in fighting problems like fast fashion which is one of the biggest problems with the textile and clothing industry.

When it comes to the employees and headquarters, Maya Maya is regularly teaching their employees to the sustainable practices they believe in. There is a no-paper print and desk office policy. The documentation is shared through their global cloud system, and everything is almost completely digital. The team working for the company is international so remote working is highly supported. Most of the back-office staff works remotely so no resources are used to keep up big offices. One of their green initiatives is committed to lowering the consumption of electricity. In the physical stores, they implemented a new store concept that reduced electricity consumption by 50%. From this year, Maya Maya included eco-materials too (Maya Maya, 2021).

For the future, the Maya Maya brand aspires to further create unique and high-quality products, while practicing sustainable activities for all stakeholders. It aims to become a luxury sports brand, with an industry-leading smart store and omnichannel concept, which will attain a memorable customer experience and grow the brand's strength. The brand plans to expand and strengthen its brand presence in Europe in the next 5 years, and move to foreign continents thereafter, including Australia and North America. Throughout the expansion, the brand will continue to remain exclusive in its distribution, limiting the presence to only one high street store and one outlet store per country. Additionally, they are thinking of allowing franchising or selling their clothes in other stores than the brand stores.

In this context, the sustainability-inspired gamification fully suits the image of the brand and the type of customers they have.

5.2 Implementation of a Gamified Process on the Maya Maya Website

The definition and implementation of the gamified process at Maya Maya was a complex operation. It took more than six months of active work to achieve the end results, and this was made even more difficult by the raging pandemic influencing the customers' behaviour, and probably the results. Almost the whole implementation of the gamified process was done by me personally, with some help from my co-workers at Maya Maya.

In chapter 1, subchapter 1.2, I mentioned Robson et al. types of player experiences division that used two fundamental dimensions: (1) player participation or the extent to which players are involved, and (2) player connection or the type of environmental relationship that unites the player with the experience. According to those dimensions, the participants in the "Run your story" gamified feature would fall within the quadrant of *Performance* which means they are players who actively and directly contribute to an experience. They are immersed

in the action, in this case, they physically run the distances, and they suspend or escape other parts of their lives while doing the performance. This was taken into consideration when constructing the gamified feature, and more importantly so, when coming up with the reward system.

In chapter 1, section 1.3.4, I presented the combined method for the implementation of a gamified feature on an eCommerce website. According to the combined method, I will dive into how the implementation happened step by step.

5.2.1 Ideation and presentation to the management

The idea from the start consisted of the same elements overall, however, several changes were made from the management's side which impacted the whole process. The idea was to create a new webpage on the official website of Maya Maya *www.mayamaya.ch* which will be the gamified feature. The idea for the narrative was that it will promote sustainable behaviours connected to practicing sports and motivate the brand's customers to participate in the challenge weeks.

A big part of this thesis is the Strava app. The Strava app is an app that is used by people who practice different sports (running, hiking, cycling, swimming, etc.) to measure their efforts and progresses, to be a part of challenges and clubs, to track their overtime improvements, and many other things. In this gamified process, Strava was used as a way of measuring people's efforts. For instance, we would have no way of knowing which person ran the most kilometers on our own, but taking that data from the Strava app which records people's movements through GPS is clearly telling us which person did the most kilometers, how fast, when, and much other information.

The initial idea was to create a club on Strava for our customers which supports three sports: running, cycling, and swimming. This type of club also measures the elevation that people climb to when they are doing sports. According to that, also people who are hiking or trekking would be suitable to be a part of the club. Since Maya Maya offers all of these sports, their customers belong to all of these groups separately.

Upon the presentation of the idea to the management, it was decided that instead of this joint club, a running-only club would be more in line with the brand's current running campaigns. This decision affected the further results because it divided the pool of customers to a much smaller fraction. This became a bigger problem later in the process than anticipated.

5.2.2 Analysis and exploration

Once the decision was made to have a Strava club dedicated only to running, the customer pool became only the customers interested in running. According to this, the idea for the narrative had to be shifted, along with the idea of prizes for the winning customers. Keeping

in mind that the customer persona of the Maya Maya brand is generally people over 40 years of age, the conclusion was that the narrative had to be simple, straight to the point, and informative on sustainable issues. From previous experiences, I had the knowledge that customers of Maya Maya responded well to discounts and special offers. The goal was to offer these types of discounts or special offers to customers in exchange for their running efforts in the name of being more sustainable. Running is considered to be one of the most sustainable sports in the world based on the fact that no extra equipment is needed to practice it. Additionally, facts about commute-running were included in the storyline which is a new way of people commuting to and from work-via running.

5.2.3 Game mechanics (Who and How)

The participants in the gamified feature are the customers on one side, and the Maya Maya brand on the other side. The majority of customers in total are over 40 years of age, and a bigger percentage of the customers are male. Figure 9 depicts this data, in the period of 01.01.2021- 20.06.2021.





Source: Google Analytics Maya Maya (2021).

Since this is a luxury brand with generally higher prices of the products, the customer persona is somebody who is well situated. Furthermore, in the period of 2021 so far, the top three countries from which all the visitors to the website came were Germany, Slovenia, and Switzerland. This information played a role in the type of narrative the gamified feature was given.

The How is consisting of the game elements that were used to create the gamification. I used prizes that were in line with the customer persona I previously explained. Additionally, the Strava leaderboard and progression were displayed on the gamified feature page. The narrative supported the feature with its sustainable elements and inspiring context. A planet character was used to guide the players through the page of the gamified feature.

5.2.4 Implementation

The first step of the technical side of the implementation was to create the Strava club. The creation was fairly easy and was done by me. In consultation with the management, a proper description and cover image were approved. In the next several months, I tried to get as many runners to join the club as I possibly could. The main problem arose here since the turnout was generally low.

I tried several different tactics throughout all of the channels of Maya Maya. I included the Strava club invitation in a monthly newsletter, I invited the customer to join on the official Maya Maya Instagram profile, I joined different running groups and forums where I promoted the club, etc. In the end, only 24 people were a part of the club, which is at least half less than I intended.

In the meantime, I created the page <u>www.mayamaya.ch/runyourstory</u>. I built the whole "Run your story" page, as a website editor of Maya Maya. Everything on the page from blocks and functionalities, design and aesthetics, to written content and storyline flow was done by me. The name of the gamified feature was chosen to be "Run your story" taking into consideration the slogan of the company which is "If you don't go, you don't have a story". On the page, there were several game elements, starting with the planet character. The planet character was created by the graphic designer of Maya Maya, approved by management and implemented by me.





Source: Maya Maya (2021).

The planet character depicted in Figure 10, was leading the players through the storyline, representing the sustainability aspect of the ideas as well. The narrative that I wrote, explained that running has a low impact on the environment and that it is a very sustainable sport. Additionally, there were informative tips on how a person can become an even more sustainable runner.

Next, a very important part of the gamified feature was presented- the game mechanics. The rules which the players had to comply with were very simple and consisted of only three

steps, depicted in Figure 11. The rules were follow the club, pay attention to the challenge weeks, and participate to win prizes.



Figure 11: Rules in the "Run your story" gamified feature

Source: Maya Maya (2021).

Furthermore, the challenge weeks were presented with all the information that might interest the players like the dates, the goals, the prizes, and the bonus prizes for the players, as can be observed in Figure 12.



Figure 12: Challenge weeks presented on the gamified feature

Source: Maya Maya (2021).

Below the challenge weeks, another game element was included and that was the live data of the progression of the club's activities on Strava, see Figure 13. This way, anybody that came to the page could see which are the latest runs, how long they were, what is the total number of data for the whole club, and much other information.



Figure 13: Strava integration with the "Run your story" gamified feature

Source: Maya Maya (2021).

Finally, at the bottom, Maya Maya's Night Vision running collection was presented with a call to action button to the page of the collection. Images of this collection were shown adequately.

The majority of the creation of this page was done by me since I am already familiar with the Odoo platform working as a website editor. For small aesthetic details like a fixed background, bigger margins on the sides of the page, the mobile version of the page, and so on, Maya Maya's developer assisted me, as well as another developer outside of the company.

5.2.5 Evaluation and monitoring

Taking into account the small number of participants, and the very limited period in which the gamification feature was live, no further corrections were made. I was monitoring the feature daily, noting the changes and the behaviour of the participants. In the future, the gamified feature will be left in Maya Maya's hands and the decision of progress or termination is in their hands.

5.3 Comparison Analysis of Data before and after Implementation

To analyse the results of the gamified feature and compare the customer engagement pre and post-implementation, I will be using data from Google Analytics. The Google Analytics account of Maya Maya is directly connected with the website and it records all data in real-time. Customer engagement entails the interactions that the customers have with the brand, and practically those can be measured through different parameters such as page views, average time on page, bounce rate, etc.

In June, two weeks were active challenge weeks, and two weeks were passive. I will present data in two periods: data before the implementation of the gamified feature and data in the period of the two challenge weeks with the passive week in between. According to the presented data, I will conclude if the gamified feature increased customer engagement.

5.3.1 Before implementation of gamified feature

I will take data from Google Analytics three weeks prior to the start of the gamified feature. The data is about the whole website in general- it's an audience overview. The period before the gamification is from 10.05.2021 to 31.05.2021.

Parameter	Users	New Users	Sessions	Number of sessions/user	Pageviews	Pages/session	Avg. session duration	Bounce rate
Value	4368	4034	5625	1.29	33999	6.04	00:02:21	28.43%

Table 1: Audience Overview

Source: Own work.

As we can see in Table 1, in the period prior to the gamified feature, the Maya Maya website had 4368 users, 4034 new users, 5625 and sessions on site. Each user did 1.29 sessions. The total number of pageviews on the website was 33999, and people stayed on the website for 2 minutes and 21 seconds on average. The bounce rate was 28.43%.



Figure 14: Percentage of visitors on the website



Out of all visitors, 84% were new visitors, and only 16% were people returning to the website as can be observed in the pie chart in Figure 14.



Figure 15: Age group division of visitors on website

Source: Own work.

When it comes to demographics, 9.25% were people aged 18-24, 22.92% were people aged 25-34, 18.76% were people aged 35-44, 17.20% were people aged 45-54, 21.67% were people aged 55-64, and 10.19% were people over the age of 65.



Figure 16: Gender division of visitors

Source: Own work.

Gender-wise, the pie chart in Figure 16 shows that the majority or 54% were female, and a bit less or 46% were male.

5.3.2 After implementation of gamified feature- challenge weeks and the week between

In this part, I will take the same type of data from Google Analytics but in the period when the gamification was included on the website.

Parameter	Users	New Users	Sessions	Number of sessions/user	Pageviews	Pages/session	Avg. session duration	Bounce rate
Value	2785	2525	3934	1.41	21871	5.56	00:02:16	28.77%

Table 2: Audience overview after gamification

Source: Own work.

As we can see in Table 2, in the period during the existence of the gamified feature, the Maya Maya website had 2785 users, 2525 new users, 3934, and sessions on site. Each user did 1.41 sessions. The total number of pageviews on the website was 21871, and people stayed on the website for 2 minutes and 16 seconds on average. The bounce rate was 28.77%.



Figure 17: Percentage of visitors on the website after gamification

Source: Own work.

Out of all visitors, 82% were new visitors, and only 18% were people returning to the website as can be observed in the pie chart in Figure 17.



Figure 18: Age group division of visitors on website after gamification

When it comes to demographics, 15.88% were people aged 18-24, 22.47% were people aged 25-34, 18.29% were people aged 35-44, 18,39% were people aged 45-54, 14,42% were people aged 55-64, and 10.55% were people over the age of 65.

Source: Own work.



Figure 19: Gender division of visitors after gamification

Source: Own work.

Gender-wise, the pie chart in Figure 19 shows that the majority or 53% were male, and a bit less or 47% were female.

5.3.3 Comparison analysis

From the previously presented figures, it can be seen that the period of the gamified feature was generally quite less engaging in almost all aspects of the website compared to the previous period. I think the biggest reason for these results is the fact that generally in June the engagement of customers is always lower compared to the previous months at Maya Maya.

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Parameter	Users	New	Sessions	Number of	Pageviews	Pages/session	Avg.	Bounce
		Users		sessions/user			session	rate
							duration	
Value	-36,24%	-37,41%	-30,06%	+9,69%	-35,67%	-8,02%	-3,47%	-1,22%

Table 3:	Comparison	of parameters	before and	after	gamification
		~ 1	•	~	0 0

Source: Own work.

From Table 3, we can observe that almost all parameters worsened in the period of the gamified feature in comparison to the previous three weeks. The only two parameters that improved, were the number of sessions per user which increased by 9.69%, and the lowered bounce rate by 1.22%. So the returning customers were those that were more engaged increasing the number of sessions per user, and they abandoned the website less. This means that if the gamified feature had an impact on the customers of Maya Maya, it was to the loyal ones that are often returning to the website.

Another thing that can be concluded from Figures 14 and 17 is that the percentage of returning visitors increased from 16% to 18%. This is in accordance with my explanation above. Figures 16 and 19 show that the percentage of male visitors increased from 46% before the implementation of the gamified feature to 53% in the period of the execution of the feature. The female visitors did the opposite and went from 54% to 47%.

In the age groups, in Figures 15 and 18 the most drastic differences can be observed in the 18-24 and 55-64 groups. Namely, before the implementation of the gamified feature, the group in the 18-24 age group was 9.25%, and after the implementation, it was 15.88%. The age group of 55-64 was 21.67% before the implementation and went to 14.42% after the implementation. This means that if the gamified feature had an impact on the customers' engagement it was to the younger audience which makes a lot of sense since the younger people are using the Strava app quite more frequently than the senior people.

As a person with experience in the work of Maya Maya, I am aware that there is a big difference in engagement in May and June generally every year. Additionally, many other factors played a role in these parameters, which I will explain further in the analysis. I believe that in order to get a better perspective of how this gamification impacted the engagement, I also need to present the same parameters taken from the same exact dates from the year 2019. Normally, I would compare the dates to the same dates in the previous year. However, due to the pandemic and its strong effects on the website and engagement with the Maya Maya brand, I think it's much more relevant if I use the data from the year before the pandemic. This way, we can observe the difference in two more or less normal years for the brand in terms of sales and engagement.

Parameter	Users	New Users	Sessions	Number of	Pageviews	Pages/session	Avg.	Bounce
				sessions/user			session	rate
							duration	
Value	+26.02%	+19.84%	+44.37%	+14.56%	+127.42%	+57.53%	+3.62%	-47.83%

Table 4: Comparison with parameters in 2019

Source: Own work.

Table 4 shows the comparison for the same period of 01.06. to 20.06. in 2019 and 2021. As we can observe, the results are better in all parameters. An increase in users of 26.02%, 19.84% in new users, 44.37% in sessions, 14.56% in the number of sessions per user, 127.42% in page views, 57.53% in pages per session, and 3.62% in average session duration can be observed. Additionally, the bounce rate lowered by 47.83% from 2019 to 2021.

The percentage of returning visitors increased from 11.5% in 2019 to 18.3% in 2021. When it comes to age groups, there is an increase in all the age groups with the exception of two from 25-34 and 35-44.

These results are probably due to the fact that the brand is improving over time and getting bigger, but the gamified feature might have had a minor impact on the results as well.

5.3.4 Gamification page

The presented data so far was for the whole website overall. Additionally, I will present data specifically from the "Run your story" gamification page.

Parameter	Pageviews	Unique pageviews	Avg. time on	Bounce rate
Value	31	20	page 00:07:00	78.57%

Table 5: Parameters on gamification page

Source: Own work.

From Table 5, we can observe that not a lot of people visited the gamification feature page. There were 31 page views, out of which 20 were unique visits. On average, people spent 7 minutes on the page. The bounce rate was 78.57%. These results suggest that not many people engaged with the gamification. The reason for this, I believe, is the fact that the club was only a running one. Additionally, as we previously concluded, mostly younger people engaged with it. So the fact that the brands' customer persona is an older, well-situated person didn't help the case. Moreover, maybe the gamified feature was not presented enough to the social pages of the brand. It was promoted in the monthly newsletter and on the official Instagram profiles' stories. Furthermore, it was shared on another Instagram profile connected to Maya Maya. A bigger exposure would have maybe helped the cause.

5.4 Limitations of the Empirical Data and Future Research

There are several limitations connected to the practical part of this thesis. These limitations influenced the results of the gamified feature and essentially made it what it is.

Firstly, one of the biggest limitations is that the Strava club was decided to be a running one only. This sectioned a very small piece of the customer base and made it very hard to gather people interested in the challenge weeks. Brands like Maya Maya that are not specialized in one type of sporting activity have a very diverse customer base. My personal opinion is that if the club included several of those groups starting with the one that's most popular- hiking, the results would have been quite different. That being said, the sample that participated in the gamified feature and the challenge weeks is too small to create any type of definitive conclusions.

Secondly, other things happening on the brands' website influenced the results too. It can't be known for sure if the gamified feature had any impact on the overall parameters of the website. Additional offers, campaigns, presentations were happening at the same time as the duration of the gamified feature that could have had both positive or negative impacts on the end results.

Lastly, the time duration of the gamified feature might have been too short for it to produce any relevant data. Two challenge weeks are a short period of time to promote something as a gamified feature. However, this decision was made under the Maya Maya brand and it was in accordance with their respectful limitations.

There is a lot of capacity for further research in terms of using the combined method of implementation of a gamification, as well as Maya Maya using the already existing gamified feature in their future work. Gamified features like the one created for the purpose of this thesis would give better results if they were implemented on bigger brands with much more customer engagement, to begin with, and also maybe brands that are specialized in one sport in particular.

CONCLUSION

With the constant development of technology and its implications in business, it is no surprise that gamification is becoming a norm for engaging customers in different industries. The fast growth of the market indicates that organizations implement different gamifications in their practices, be it to create awareness, call for action, promote products, optimize processes, or simply sell. Customers are becoming more demanding in terms of engaging with a certain brand; they expect more; they seek more. Going the extra step to create gamified features to gain that engagement is successful in many cases as discussed previously.

The theoretical part of this thesis provided many examples of gamified features which were a direct inspiration for the creation of the "Run your story" gamified feature for the Maya Maya website. Research into all of those cases, as well as reading scientific studies that prove the power of proper gamification, made the second part of the thesis possible. The practical part posed many challenges that were not expected before the start of the project. This brings a much clearer picture as to how much thought and understanding of the customers' behaviours and habits goes into even a simple gamified feature as the one presented in this thesis.

The main research questions of this thesis were:

- R1: Will including a gamified process of doing sports on the Maya Maya website in the name of being more sustainable increase customer engagement?
 - R1.1: If so, to which extent?
 - R1.2: If not, which are the reasons for failure?

Through the creation and implementation of the "Run your story" gamified feature on the Maya Maya's website, I conclude that there was not enough data to notice if including this feature on the website in the name of being more sustainable increased the engagement of the customers.

Although, the data comparison to 2019 showed improved engagement in most of the parameters, a direct connection with the gamified feature can't be done. The brand is steadily growing and there are other promotions and offers in place to which the improved engagement can be attributed. In order to obtain more relevant data, firstly, more participants are needed in the challenges. Secondly, possible tracking links or customer screen movement recording is needed in order to notice whether the gamified feature has a direct impact on the engagement. In this way, the full customer behaviour would be observed.

Another thing that should be taken into account is the type of customers and their behaviour prior to the gamification. Even though in this project, they were taken into consideration to a certain extent, after finishing the whole project I believe that a gamified feature might not be the right option for a brand as Maya Maya, or a different approach is needed with higher

prize rewards, more game elements included, and a louder sustainability message across all platforms of the brand. I believe that one of the major shortcomings of the gamified feature was the division of the consumers' pool by only targeting the people that practice running, making the number of participants quite limited. My biggest takeaway from this thesis is that gamification is a much more complex process than expected. It undoubtedly requires deeper research into the consumers, consumers' habits and behaviours, and the customer persona of the given brand.

REFERENCES

- Akbulut, D. & Yıldırım, G. (2019). "The Usage of Green Gamification for Public Interest Function of Public Relations". In D. Yeng, & A. Algül (Eds.), *CTC 2019 Communication and Technology Congress* (pp. 119-132). Bologna: EDITOGRAFICA.
- 2. Alcott, H. (2009). Social Norms and Energy Conservation. *Journal of Public Economics*, 95(1-2), 1082-1095.
- 3. Alsawaier, R.S. (2018a). The effect of gamification on motivation and engagement. *International Journal of Information and Learning Technology*, *35*(*1*), 16-18.
- 4. Alsawaier, R.S. (2018b). The effect of gamification on motivation and engagement. *International Journal of Information and Learning Technology*,*35*(1), 56-57.
- 5. Beavis, L. (2013, May 16). *Recyclebank: recycling means points*. Retrieved July 2021, from https://shortest.link/Kk-
- 6. Berger, A., Schlager, T., Sprott, E. D. & Herrmann, A. (2017). Gamified interactions: whether, when, and how games facilitate self-brand connections. *Journal of the Academy of Marketing Science*, *46*(*4*), 652-673.
- Brodie, R., Hollebeek, L. & Conduit, J. (2016). "Customer engagement behaviours and value co-creation". In M. Alexander, & E. Jaakkola (Eds.), *Customer* engagement: contemporary issues and challenges (pp. 3-11). New York: Routledge
- 8. Brundtland Commission. (1987). *Our Common Future: The World Commission on Environment and Development*. Oxford University Press. http://www.un-documents.net/our-common-future.pdf
- 9. Caillois, R. (1958). "The Classification of Games". In M. Barash (Ed.), *Man, Play and Games* (pp. 11-26). Glencoe: The Free Press of Glencoe, Inc.
- 10. Chastan, C. (2016, August 26). "*GREEN GAMIFICATION*" Applying the 'Hooked' Model to ecology. Retrieved March 2021, from https://medium.com/meetmangrove/green-gamification-b4f9a6f24d6d
- 11. Chou, Y.-k. (2021). *The Octalysis Framework for Gamification & Behavioral Design*. Retrieved April 2021, from https://yukaichou.com/gamification-examples/octalysis-complete-gamification-framework/

- Chowdhury, A. K. (2014). Environmental Impacts of the Textile Industry and Its Assessment Through Life Cycle Assessment. *Environmental Conservation*, 14(4), 2-3.
- 13. Claudio, L. (2007). Environmental Impact of the Clothing Industry. *Environmental Health Perspectives*, *115*(9), 448-454.
- 14. Cox, A. (1999, January 21). *Multi-User Dungeons*. Retrieved January 2021, from https://mud.co.uk/richard/ifan294.htm
- 15. Deloitte. (2013). Tech Trends 2013: Elements of Postdigital. *Deloitte*. https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology/us-cons-tech-trends-2013.pdf
- 16. Department of Economic and Social Affairs: Population Division. (2017). World Population Prospects: The 2017 Revision. United Nations. https://www.un.org/development/desa/publications/world-population-prospectsthe-2017-revision.html
- 17. Deterding, S., Khaled, R., Nacke, Lennart & Dixon, D. (2011, May 7-12). *Using Game Design Elements in Non-Game Contexts*. Proceedings of CHI 2011 Workshop Gamification: Toward a Definition. Vancouver, BC, Canada.
- EPA. (2021). *Textile Manufacturing Sector (NAICS 313)*. Retrieved May 2021, from https://www.epa.gov/regulatory-information-sector/textile-manufacturing-sectornaics-313
- 19. European Commission. (2020). *A new Circular Economy Action Plan for a cleaner and more competitive Europe*. European Commission. https://eurlex.europa.eu/legal-

```
content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN
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- 20. European Commission. (2020). *Circular economy action plan*. Retrieved February 2021, from https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en#:~:text=The%20European%20Commission%20adopted%20the,(CEAP)% 20in%20March%202020.&text=It%20targets%20how%20products%20are,for%20 as%20long%20as%20possible.
- 21. European Parliament. (2019, January 17). Environmental impact of the textile and clothing industry: What consumers need to know. Retrieved July 2021, from https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI %282019%29633143
- 22. European Parliament. (2021, March 03). *Circular economy: definition, importance and benefits*. Retrieved July 2021, from https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/c ircular-economy-definition-importance-and-benefits
- 23. EY Global. (2017, March 9). *Why Sustainable Development Goals should be in your business plan.* Retrieved March 2021, from https://www.ey.com/en_gl/assurance/why-sustainable-development-goals-should-be-in-your-business-plan

- 24. Games for change. (2008). *FoldIt*. Retrieved June 2021, from http://www.gamesforchange.org/game/foldit/
- 25. Green Wallet. (2021, March 13). *The World's ethical marketplace*. Retrieved June 2021, from https://greenwallet.com/
- 26. Guterres, A. (2018, September 10). 2019 Climate Change Summit. Retrieved July 2021, from https://www.un.org/sg/en/content/sg/speeches/2018-09-26/remarks-high-level-event-climate-change
- 27. Hermann, R. (2013). *SWISSCOM All eyes on S4*. Retrieved February 2021, from http://www.raphael-hermann.com/all-eyes-on-s4/2015/4/27/all-eyes-on-the-s4
- Holbrook, M. B., Chestnut, R. W., Oliva, T. A. & Greenleaf, E. A. (1984). Play as a Consumption Experience: The Roles of Emotions, Performance, and Personality. *Journal of Consumer Research*, 11(2), 728-739.
- 29. Huizinga, J. (1949). "Nature and significance of play as a cultural phenomenon". In *Homo Ludens: A study of the play-element in culture*. London: Routledge and Kegan Paul Ltd.
- 30. Huynh, D., Lida, H. & Zuo, L. (2016). "Analyzing Gamification of "Duolingo" with focus on its course structure". In A. Hernàndez, L. Albarracin, & N. Gorgorió (Eds.), *Games and Learning Alliance* (pp. 268-277). Springer International Publishing.
- Klevers, M., Sailer, M. & Günther, W. A. (2016). Implementation model for the gamification of business process. *Simulation and Gaming in the Network Society*, 9, 173-184.
- 32. Klock, A., Cunha, L., Carvalho, M., Rosa, B., Anton, A. & Gasparini, I. (2015). Gamification in e-Learning Systems: A Conceptual Model to Engage Students and Its Application in an Adaptive e-Learning System. *International Conference on Learning and Collaboration Technologies*, 9192, 595-607.
- 33. Koerper, H. & Whitney-Desautels, N. (1999). Astalagus bones: artifacts or ecofacts? *Pacific coast archaeological society quarterly*, *35*(2-3), 69-80.
- 34. Kronisch, D. C. (2019). Green gamification: Changing habits through long term engagement and stories. A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF PHILOSOPHY. University of Victoria.
- 35. Kuisma, J. (2003). Practical steps towards sustainability in the retail trade: the case of Finland's Kesko. *Industry and Environment*, 26 (1), 10-12.
- 36. Lappé, A. (2021, March 13). *Anna Lappe*. Retrieved March 2021, from https://annalappe.com/
- 37. Laskowski, M. (2013). A Short Overview of Pros and Cons of gamification. *Actual Problems of Economics*, *145*, 373-377.
- Lorenzi, R. (2013, August 14). *Pieces of Earliest Games Recovered*. Retrieved June 2021, from https://www.seeker.com/pieces-of-earliest-games-recovered-photos-1767701926.html
- Maslow, A. (1943). A theory of human motivation. *Psychological Review*, 50, 370-396.

- 40. Maya Maya. (2021). Google Analytics Report. Maya Maya.
- 41. Maya Maya. (2021, July). *Run Your Story*. Retrieved July 2021, from https://www.mayamaya.ch/runyourstory
- 42. Maya Maya. (2021). *Sustainability*. Retrieved July 2021, from https://www.mayamaya.ch/explore/about-us/sustainability
- 43. McCormick, T. (2013). Anthropology of an idea: Gamification. *Foreign Policy*, 201, 26-27.
- 44. McLeod, S. (2020, December 29). *Maslow's Hierarchy of Needs*. Retrieved December 2020, from https://www.simplypsychology.org/maslow.html
- 45. Moise, D. (2013). Gamification- the new game in marketing. *Romanian Journal of Marketing*, *2*, 29-33.
- 46. Morschheuser, B., Werder, K., Hamari, J. & Abe, J. (2017). How to gamify? A method for designing gamification. *50th Hawaii International Conference on System Sciences*, 1298-1307.
- 47. New York University Stern. (2019, March 11). *NYU Stern Center for Sustainable Business and IRI Launch New Sustainable Market Share Index™*. Retrieved May 2021, from https://www.stern.nyu.edu/experience-stern/news-events/nyu-stern-center-sustainable-business-and-iri-launch-new-sustainable-share-index
- 48. OECD. (2011). *Towards Green Growth: A summary for policy makers*. OECD. https://www.oecd.org/greengrowth/48012345.pdf
- 49. OECD. (2021). About Us. Retrieved June 2021, from https://www.oecd.org/about/
- 50. Oracle. (2020, June 22). *Opower Reimagines the Home Energy Report*. Retrieved June 2021, from https://www.oracle.com/corporate/pressrelease/oracle-opower-home-energy-report-062220.html
- 51. Oracle. (2021). *What is Opower?* Retrieved June 2021, from https://www.oracle.com/industries/utilities/products/what-is-opower.html
- 52. Pawliczek, A. (2013). Effect of management systems ISO 9000 and ISO 14000 on enterprises' awareness of sustainability priorities. *E&M Ekonomie a Management*, *16*, 66-80.
- 53. PepsiCo. (2021). *Recycle Rally*. Retrieved July 2021, from https://pepsicorecycling.com/RecycleRally
- 54. Percy, J. (n.d). *Heineken Star Player: The dual-screen gaming pioneer*. Retrieved January 2021, from https://www.jamenpercy.com/heineken-star-player
- 55. Purvis, B., Mao, Y. & Robinson, D. (2019). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, *14*, 681–695.
- 56. Rapp, A. (2017). From Games to Gamification: A Classification of Rewards in World of Warcraft for the Design of Gamified Systems. *Simulation & Gaming*, *48*(*3*), 381–401.
- 57. Ratliff, J. A. (2015). "A Classification of Video Games and Players". In *Integrating Video Game Research and Practice in Library and Information Science* (pp. 4-21). USA: IGI Global.

- 58. RecycleBanks. (2021). *Working toward a world without waste*. Retrieved June 2021, from https://www.recyclebank.com/about-us/
- Senko, S. (2018). "The Concept of Sustainable Development". In Rudawska, E. (Ed.), *The Sustainable Marketing Concept in European SMEs* (pp.29-52). Bingley: Emerald Publishing Limited.
- 60. Roberts, J., Arth, M. & Bush, R. (1959). Games in culture. *American Anthropologist, New Series*, *61(4)*, 597-605.
- Robson, K., Plangger, K., Kietzmann, J., McCarthy, I. & Pitt, L. (2014). Understanding Gamification of Consumer Experiences. *Advances in Consumer Research*, 42, 352-356.
- 62. Sailer , M., Hense, J. U., Mayr, S. K. & Mandl , H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior 69*, 371-380.
- 63. Šajn, N. (2019, January). Environmental impact of the textile and clothing industry. Retrieved April 2021, from https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633143/EPRS_BRI(20 19)633143_EN.pdf
- 64. Shahbandeh, M. (2021, January 22). *Global Apparel Market Statistics & Facts*. Retrieved January 2021, from https://www.statista.com/topics/5091/apparel-market-worldwide/#:~:text=The%20global%20apparel%20market%20is,the%20rise%20ac ross%20the%20world.
- 65. Shane, K. (2013, May 31). *3 Mobile Apps for the Gamification of Energy Conservation*. Retrieved June 2021, from https://www.gamification.co/2013/05/31/3-moble-apps-for-the-gamification-of-energy-conservation/
- 66. Smith, J. H., Egenfeldt-Nielsen, S. & Pajares Tosca, S. (2013). "General Models for Understanding Games". In *Understanding Video Games: The Essential Introduction* (pp. 31-33). New York: Routledge.
- 67. Statista. (2018, May 8). Value of the gamification market worldwide in 2016 and 2021. Retrieved January 2021, from https://www.statista.com/statistics/608824/gamification-market-value-worldwide/
- 68. Statista. (2019). Sales of the leading apparel/footwear retailing companies worldwide in 2019. Retrieved January 2021, from https://www.statista.com/statistics/257979/sales-of-the-leading-apparel-footwear-retailing-companies-worldwide/
- 69. Strava Metro. (n.d). *Better cities for cyclists and pedestrians*. Retrieved July 2021, from https://metro.strava.com/
- 70. Strava. (n.d). About us. Retrieved July 2021, from https://www.strava.com/about
- 71. Stringer, C., Didham, J. & Theivananthampillai, P. (2011). Motivation, pay satisfaction and job satisfaction of front-line employees. *Qualitative Research in Accounting & Management*, 8(2), 161-179.

- 72. Svensson & Wagner, B. (2012). Business sustainability and E-footprints on Earth's life and ecosystems: generic models. *European Business Review*, 24(6), 543-552.
- 73. Szaky, T. (2017, August 8). The Positive Impact of Environmental "Gamification". Retrieved April 2021, from https://www.huffpost.com/entry/the-positive-impact-ofen_b_11386874
- 74. Bewersdorf (2005). "The Uncertainty of Games". In *Luck, Logic and White Lies: The Mathematics of Games* (pp. 9-12). Wellesley, MA: A K Peters, Ltd.
- 75. UNEP (2001). International Declaration on Cleaner Products: Implementation Guidelines for Facilitating Organizations. UNEP. shorturl.at/qCLM3
- 76. United Nations. (2015, September 25). *Transforming our world: the 2030 Agenda for Sustainable Development*. Retrieved February 2021, from https://sdgs.un.org/2030agenda
- 77. United Nations: DESA. (n.d). *The 17 goals*. Retrieved February 2021, from https://sdgs.un.org/goals
- 78. WDSU News. (2011, September 26). *Gamers Solve Medical Puzzle* [Video]. YouTube.

https://www.youtube.com/watch?v=RBuy6C_B1N0&ab_channel=WDSUNews

- 79. Williams, J. (2017, November 13). *How Strava is supporting sustainable transport*. Retrieved March 2021, from https://earthbound.report/2017/11/13/how-strava-is-supporting-sustainable-transport/
- Zhang, Q., Huhn, K., Tan, A., Douglas, R., Li, H., Murti, M. & Lee, V. (2017). "Testing is Healthy" TimePlay campaign: Evaluation of sexual health promotion gamification intervention targeting young adults. *Canadian Journal of Public Health*, 108(1), 85-90.

APPENDICES

Appendix 1: Povzetek (Summary in Slovene language)

Na področju trženja in promocije postajajo igre vedno bolj pogost način motiviranja potrošnikov za doseganje različnih ciljev. To se dogaja skozi proces igrifikacije, ki je prisoten v skoraj vsaki industriji, od medicine in modne industrije do izobraževalnih sistemov. Največji dokaz za učinkovitost igrifikacije leži v osupljivi rasti igrifikacijskega trga, ki je presegel pričakovanja rasti v letu 2016 (McCormick, 2013). Glavni cilj procesa igrifikacije je motiviranje uporabnikov, da izvedejo določeno dejanje. Sam proces je tesno povezan s psihologijo potrošnika ter njegovo zunanjo in notranjo motivacijo.

Za uporabnike zunanji motivatorji pogosto niso zadostna motivacija, zato je potrebna prisotnost tudi notranjih. Primer prisotnosti obeh vrst motivatorjev je zelena igrifikacija, katere namen je vzpodbujati trajnostno ravnanje in okolju prijazne navade sodelujočih (Chastan, 2016). Po podatkih ameriške raziskave, ki jo je izvedel Center za trajnostno poslovanje na Univerzi v New Yorku, so 50,1% rasti trga v letih od 2013 do 2018 prispevali trajnostno oglaševani proizvodi (New York University Stern, 2019). Dejstvo, da je potrošnikom vedno bolj pomembna trajnostna praksa blagovnih znamk, katerih izdelke kupujejo, je s poslovnega vidika postalo velika prioriteta.

Cilj te magistrske naloge je ugotoviti, ali bo igrifikacija športa z namenom vzpodbujanja trajnostnega ravnanja imela učinek na potrošnike blagovne znamke Maya Maya in doprinesla k večjemu prometu, na primer obiskom in preusmeritvam na njihovo spletno stran (www.mayamaya.ch).

Maya Maya je luksuzna blagovna znamka športnih oblačil, katere ciljna skupina potrošnikov ne izbira športnih oblačil glede na ceno. Igrifikacija procesa, ki je podkrepljen z notranjimi motivatorji, kot je podpiranje trajnostnega ravnanja, bi morala v tem kontekstu povečati promet blagovne znamke. Poglavitna vprašanja in cilji raziskave te magistrske naloge so torej:

- Bo uporaba igrifikacije športa na spletni strani Maya Maya z namenom trajnostnega ravnanja povečala zanimanje potrošnikov?
- Če da, do kolikšne mere?
- Če ne, kaj so razlogi za neuspeh?

Metodologija je razdeljena na dva dela: teoretični in empirični. Prvi, teoretični del, je osnovan na sekundarni raziskavi relevantne znanstvene in profesionalne literature, za večjo jasnost pa so bili dodani primeri študij igrifikacije in trajnosti. V drugem, empiričnem delu, sem imela dostop do spletnega mesta Maya Maya, kjer sem preko programske opreme za upravljanje Odoo ustvarila proces igrifikacije na novi spletni strani, ki je bila ustvarjena v ta namen. Spletna stran je bila povezana z aplikacijo Strava, preko katere sem beležila sodelovanje potrošnikov v procesu igrifikacije. Raziskavi sledi analiza pridobljenih podatkov.

Appendix 2: Narrative of the gamified feature

DID YOU KNOW?

Running is considered to be one of the sports that have the lowest impact on the environment. All you need to run is your body. You can do it anytime, anywhere, without any additional equipment.

WHY IS THIS IMPORTANT?

"I alone cannot change the world, but I can cast a stone across the waters to create many ripples" - Mother Theresa

The world now more than ever is highly impacted by our actions. The actions of the citizens of the world, and the actions of the businesses that prevail in that world. Together, we can do our small little parts in creating a better world, and many ripples may follow.

How can we do that?

Through educating ourselves towards being more sustainable.

To get you motivated, we came up with the "Run your story" challenge. You're the author of your story. We're just here to help.

HOW CAN YOU BE A SUSTAINABLE RUNNER?

- Purchase clothes, gear & shoes that are sustainably produced with long product life.
- Avoid single-use plastic bottles (have a reusable one).
- Don't throw away protein bar wrappers, energy gel packaging, or other garbage when you're running.
- If you're trail-running, be mindful of nature, plants, trees, animals, etc.
- Practice run-commuting as much as you can.
- While trail-running, pick up some garbage if you can carry it- cleaning nature while exercising your body.
- Spread awareness of these practices with your running peers and community.