



JÖNKÖPING UNIVERSITY  
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# The Gamification Process: A framework on gamification

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## **Abstract**

In this thesis a gamification framework was built based upon the existing body of literature on gamification to more easily describe the processes in how a gamified experience is developed. We interviewed different international gamification companies that are currently working with gamification to test if the theoretically developed framework had practical relevance. The results from the empirical findings indicated that the framework had practical relevance and indeed represents the processes in how the companies work with gamification in real world scenarios. However, some of the companies do not utilize the different parts integrated in the framework the same way as they are described in the thesis.

## Table of Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Background	1
1.2	Problem Statement	2
1.3	Purpose	2
1.4	Research Questions	2
<b>2</b>	<b>Research Philosophy</b>	<b>3</b>
2.1	Ontology	3
2.2	Epistemology	3
2.3	Methodology	4
2.3.1	Abductive Reasoning	4
2.4	Method	5
2.4.1	Literature Review	5
2.4.2	Sampling	6
2.4.3	Data Collection	7
2.4.4	Method of Analysis	8
2.4.5	Research Quality	9
2.4.6	Research Ethics	9
<b>3</b>	<b>Frame of reference</b>	<b>11</b>
3.1	Definition of a game	11
3.1.1	Gamification Defined	12
3.2	Participants in a Gamified Experience	13
3.2.1	The player	14
3.2.2	Player types in Gamification	15
3.2.3	Intrinsic Players	15
3.2.4	Extrinsic Players	16
3.3	Human motivation	16
3.3.1	Self Determination Theory	16
3.3.2	RAMP Framework	18
3.3.3	Flow Concept	20
3.3.4	Usage of Intrinsic Motivation	20
3.4	Game Design Frameworks	21
3.4.1	MDE Framework	21
3.4.2	DMC Pyramid	24
3.5	Ethical Considerations	30
3.6	The Parts of the Gamification Framework	31
3.7	The Gamification framework	36
<b>4</b>	<b>Empirical Findings</b>	<b>37</b>
4.1	Interviewee biography	37
4.2	Personal and Company Questions	39
4.3	Questions on Framework	42
<b>5</b>	<b>Analysis</b>	<b>46</b>
<b>6</b>	<b>Conclusion</b>	<b>52</b>
<b>7</b>	<b>Suggestions for future research</b>	<b>53</b>
	<b>Appendix</b>	<b>54</b>
	<b>References</b>	<b>56</b>

# 1 Introduction

## 1.1 Background

It all started thousands of years ago in an ancient Egypt society called Lydia. An 18-year-old famine had plagued the society and to cope with the hardships the Lydians created a game called Mancala. This was the first game recorded in history that had a cultural and psychological impact on a society by inheriting the acts of play (Freudmann & Bakamitsos, 2014). For thousands of years games evolved and affected societies, and in the modern world today, games are everywhere. Games are played by everyone and most of us have some association with game titles such as: Tetris, Super Mario and Candy Crush. The convenience and accessibility that the digital revolution brought has made games accessible to everyone and everywhere. Estimates from 2013, shows that at least 44 percent of the 1.6 billion Internet users play online games on a regular basis (Spil Games, 2013). Furthermore, by 2013 the video game industry created total revenue of 66 billion USD, and by 2017 the industry is expected to grow to 82 billion USD (Seiffert & Nothhaft, 2014). To put this in perspective, as of 2013 the gaming industry's revenue was four times higher than the music industry (Smirke, 2013).

During the rise of the game industry a programmer and inventor named Nick Pelling saw the potential of taking the game-mechanics that players experience from games, beyond the games themselves, and putting them in a non-game contexts to trigger similar psychological effects. This concept became known as Gamification. Gamification is commonly defined in two ways: "The use of game elements in non-game contexts" (Deterding, Dixon, Khaled, & Nacke, 2011) and, "A process of providing affordance for gameful experiences which support the customers overall value creation" (Hamari & Huotari, 2012).

Nike was one of the first companies that used gamification on a large scale with their pedometer Nike+ FuelBand. The idea of the FuelBand is to collect fuel-points which are accumulated by all the physical activity the users performs during a day and can be shared with friends online and displayed in online leaderboards (Kastner, 2013). In 2013 they launched a campaign targeting skateboarders in New York City called "Getting On Board". By collecting points with the FuelBand the users could gain access to an exclusive floating skate park in the middle of the city. Similar campaigns were used in major cities across the world and the FuelBand users went from 5 million in 2011 to 11 million by late 2013 (Nike, 2013). Nike is one of the 70% of the Global 2000 Organizations that uses gamification in their products or marketing (Gartner, 2011). In 2010 major corporations started to realize the potential of the gaming industry and asked themselves how to incorporate its success into their businesses. They turned to Nick Pellings word Gamification, which still is a buzzword in the corporate world.

## 1.2 Problem Statement

Gamification is a relatively new topic therefore there is only a limited amount of published articles on the subject area (Hamari, Koivisto, & Sarsa, 2014). In order to map the field we conducted an extensive literature review of 111 academic articles and we found the lack of a proper and comprehensive framework for that described the process of creating a gamified experience. The academic literature is shattered into fragments describing parts of the gamification process, yet no author has made the effort to combine the bits and pieces into a framework, which describes the process of how gamification can be used in the real world. The reason to why it is important to create a framework is because research has shown that 80% of all gamification initiatives will fail (Gartner, 2012). Companies lack a framework to follow whilst creating gamified initiative. This can be traced back to poor design and lack of knowledge in the subject area (Gartner, 2012). By creating a framework that is simple to use and that describes the gamification process as a whole we can allow companies to easier make successful gamified initiatives.

## 1.3 Purpose

The purpose of this thesis is to develop a gamified framework based on existing theory on gamification and then verify its practical relevance via field experts on gamification.

## 1.4 Research Questions

R1: Is there any need for a practical framework describing the process from start to end of a gamified initiative?

R2: What are the similarities and differences between how gamification experts approach a gamified initiative compared to the theoretical framework developed?

## 2 Research Philosophy

*In order to fully understand the logic and reasoning behind an author's statements and conclusions it is important for the reader to be aware of the ontological and epistemological beliefs of the author as well as the methodical procedures. The ontological and epistemological reasoning will dictate the author's argumentation and by understanding them it is easier to critique the research (Easterby-Smith, Thorpe & Jackson, 2015 p.46).*

### 2.1 Ontology

Ontology can be described as the way that people view reality, or truth. We identified this study of being relativistic, in other words realities' exists and they are based upon an individual's perspective. The knowledge in the world or in reality is dependent upon how the knowledge is gathered. What is real depends on the meaning that is attached to the truth. It evolves and changes around your experiences. This means that from the interactions and assumptions we made in this thesis we assumed them to be different depending on the individual and situation (Easterby-Smith et al., 2015 p.47). Therefore we could establish that there was not one truth but several, reality is not black and white, instead different scales of gray depending on who you are asking. There are other ontological approaches, which could have been chosen, but according to Easterby-Smith et al. (2015 p.54) the outcome of the relativist approach is theory generation, which is directly applicable to the purpose of this thesis.

### 2.2 Epistemology

Epistemology describes what relation that the researcher has with the research. The epistemological beliefs are dictated by the ontological beliefs. In other words, the author's view on reality (ontological beliefs) will dictate how the author believes that a subject area should be studied (Easterby-Smith et al., 2015 p.51). This thesis will therefore be angled in a Social Constructionist paradigm. Social constructionist does not view reality like an object, it is rather a social construction created and given meaning to by individuals by sharing experiences through the discourse of language. Individuals, not objective and external factors, determine what is being experienced. The idea is to find social patterns and behaviors in observations in order to understand reality. According to Easterby-Smith et al., (2015 p.53) the social constructivism is useful when the purpose is theoretical abstraction, small number of cases, when gathering rich data and human interests is the main driver in the science. The alternative would have been to take the more

objective Positivist paradigm, however this epistemology looks to examine statistical probability, which was not aligned with the purpose of this thesis.

## 2.3 Methodology

This study was qualitative therefore it was aligned with the epistemological and ontological paradigms. Qualitative research's strengths are to understand meaning, ease of adjustment to new ideas and most importantly to help with the evolution of new theories. Some of the challenges with qualitative research is that they can be viewed as untidy since they are built on subjective measures, also policy makers sometimes give them low credibility for the same reason (Easterby-Smith et al., 2015 p.56). To overcome these challenges we chose to use high amounts of peer reviewed articles as well as real world examples in order to increase the credibility.

### 2.3.1 Abductive Reasoning

Aligned with the choice of methodology and the purpose, we chose to use abductive reasoning since it was a proven way when re-contextualizing or interpreting individual phenomena in qualitative research when creating a framework or model which goal was to highlight something from the angle of a new framework (Kovács & Spens, 2005). In abductive reasoning it is emphasized to use "theory matchmaking". This implies to collect data simultaneously to the data collection processes, which in hand will imply a learning loop (Kovács & Spens, 2005). In abductive reasoning one starts by gathering and studying prior theoretical knowledge, in our case that is the literature review part. Secondly one makes real-life observation whilst conducting the original theory building. This is followed by the existing and observed theories in order to extend the prior theoretical knowledge, in other words the analysis of thesis. The results are then used to draw final conclusions of the theory suggestions (Kovács & Spens, 2005). In this thesis each of these steps was followed and the revised suggestions were presented in the future research section. By approaching this thesis with abductive reasoning it enabled us to effectively answer our purpose and research questions. An alternative to achieving almost the same results would have been to use inductive or deductive reasoning, however these two ways of reason do not offer the same flexibility and do not foster learning in the same way as the looping abductive approach (Kovács & Spens, 2005). We therefore chose the abductive approach to enhance the quality of the framework.

## 2.4 Method

*The processes in which this thesis was conducted was aligned with abductive reasoning and divided into two parts. The first part was an extensive literature review where we looked to identify and summarize the existing body of literature into a framework describing the processes of creating a gamified initiative. The second part was the validation where we developed a questioner, selected a sample, collected data and then used Content analysis to analyze and summarize the findings. The steps in how this thesis was created will be presented below, the interview guide will be presented in the appendix.*

### 2.4.1 Literature Review

Initial searches and expert consulting indicated that the gamification field lacked a framework that describes how gamified initiatives are created (Christian Lidström, personal communication, 26 January 2016). On this note we decided to craft a literature review in order to confirm our hypothesis of the lack of academic frameworks. The literature review gave the same implications. To initiate the study of gamification an initial search on seminal articles was conducted on Google scholar in order to collect keywords in order identify synonyms or similar words for gamification. The identified keywords are displayed in table 1.0. Once the keywords were identified three databases with journal publications were selected based upon Jönköping University's selection of databases. A total of 136 hits were identified and after sorting out irrelevant and misplaced material a total of 111 articles remained. Each article abstract was analyzed and a total of 46 articles were selected to serve as the theoretical foundation of this thesis.

After sorting and carefully studying the literature we started to analyze common themes and revise our research questions. According to Easterby-Smith et al., (2015, p.37) by revising the research statement and keeping search records, it would allow for the literature review to be transparent and easier to replicate in similar research. We started to see patterns between articles and how they were connected. By grouping information into common themes it allowed us to structure the entire literature review (Easterby-Smith et al., 2015 p.37). A literature review normally ends with a summary and discussion on the identified categories and themes (Easterby-Smith et al., p.37), but instead of simply summarizing and finalizing the review we mapped and sorted out the findings linked to the gamification process and crafted a framework from it.

<b>Keywords</b>	<b>Databases</b>	<b>Results</b>
Gamif*	Primo	35
"motivational affordance"	Scopus	54
"Persuasive technolog*"	Web of Science	47
		<i>*Limitations, search criteria: Business Administration, Journal Articles, English</i>

Table 1

### **Note**

Only the articles that in some way described a gamification process or a relevant phenomenon within gamification were used in building the framework. The majority of articles collected were not older than 5 years. This was a result of the recent invention of the topic Gamification. It should be noted that gamification also exists in other research fields such as teaching and medicine but these articles were discarded since the focus of this thesis is to build a framework based upon the research conducted within the fields of business administration.

### 2.4.2 Sampling

The sampling method that was used in this thesis was purposive sampling method. According to Easterby-Smith et al., (2015, p.82) if the research has a clear idea of what type of samples are needed in accordance with the purpose of the thesis they can approach possible respondents to verify whether or not they are suitable for the study. The guiding principle for this type of sampling method is theory, the basis of the sampling could be altered as the process progress since the data is used to guide theory development (Easterby-Smith et al., 2015 p.82). Since the purpose of this thesis was firstly to develop a framework from the theoretical background and secondly to test the framework via field experts, the possible alterations generated from this sampling method were presented under future studies, this was largely due to the limited timeframe of the thesis.

Since the gamification field had only been a public topic for the last six years and still was a quite loosely defined field, the amount of experience within the field needed in order to give answers of enough quality was difficult to estimate. Given the low amount of published research on gamification we realized that a person with one year of experience within gamification could possibly be equally as knowledgeable as a person with six years of experience. The probability might not

be overwhelming but given how fast you could actually read up on the subject we had to take this factor into consideration whilst selecting interviewees. So instead of taking that task upon ourselves which would be time-consuming we simply stated in the initial contact email that we were looking for someone within the company or organization that they considered to be knowledgeable and involved in the development of their gamified activities. We relied on that the companies would provide us with qualitative contacts. But in order for us to estimate their knowledge of the field we started each interview with a couple of questions on their background and what gamification was to them. In the end, we deemed all 10 interviewees to be of high quality and they were all accepted as valid sources for this thesis. However it is important to note that this has to be taken into careful consideration whilst conducting similar research.

Purposive sampling should theoretically work on any given company as long as they fulfill the criteria that we pose, and in this case the criteria were quite straight forward: We were looking for personnel or field experts that were knowledgeable and experienced working with gamification. In addition to this we wanted to increase the chance of drawing generalizable results from the results and therefore turned for an international sample. We chose to limit ourselves to Europe and North America since the majority of the journal articles were published from these countries.

### **Limitations in Sampling**

One challenge with the sampling of the second part of the purpose was to identify eligible interviewees that are willing to participate in the study. First, because not many companies openly displayed their usage of gamification. Second, because they might have viewed their usage as a trade secret and they might have been unaware of their usage of gamification. In addition, whilst searching for companies we only used English as our search language. Whilst drawing conclusions these limitations in sampling had to be taken into consideration.

#### **2.4.3 Data Collection**

The first part of the study's source of information was secondary data in the form of a literature review on both peer-reviewed and non-peer-reviewed articles collected from databases. Secondary data is a great source of information since it saves the authors effort and time; additionally it opens up a historical perspective on the research (Easterby-Smith et al., 2015, p.130). The alternative would have been to develop a framework via primary data by studying different types of companies and then crafting the framework according to the findings. The reason why we went for the secondary data option was because it was more time efficient and gave more credibility to the thesis since the majority of the literature used was already peer-reviewed.

The data collection of the second part of the thesis took place in forms of qualitative semi-structured interviews with field experts of gamification brought to us by companies using gamification. Interviews are a great way to explore a topic in-depth in order to fully understand its meaning. Semi structured interviews are appropriate to use when the purpose is to understand the respondent's "world", in situations where the step-by-step logic of different situations is unclear and the subject matter is confidential (Easterby-Smith et al., 2015 p.35). The interviews were held remotely since it offered the interviewees and the interviewers more flexibility and less commitment. (Easterby-Smith et al., 2015 p.35).

The goal of the data collection was not to learn about the gamified experiences themselves but rather to get an understanding of how they were created. Since the framework created in this study only looked at how gamification experiences are created the most interesting factor was the creation processes, not the experience itself.

We chose to approach the companies by sending an email specifying the study and what we asked of the companies. Once again purposive sampling should theoretically work on any given company as long as they fulfill the criteria posed, therefore we searched for gamification companies country by country. Once a company was found we invited them to participate in our study. A total of 30 companies were contacted and 10 of them chose to participate in the study. Each question that was asked to the interviewees was open and had the purpose to allow for the interviewees to talk freely. Each question was also directly linked to the purpose and the research questions; this can most easily be seen in the analysis chapter. The complete interview guide can be found in the appendix.

### **Data Collection Limitations**

The literature on which this study was based on predominantly came from the west world therefore we limited our data collection area to west-world countries. We did not exclude the usage of the framework in other countries but as an initial test we did not have the time or funds to expand our research further.

#### **2.4.4 Method of Analysis**

The qualitative analysis method of content analysis was used in this thesis. Content analysis aims at "*drawing systematic inferences from qualitative data that have been structured by a set of ideas or concepts*" (Easterby-Smith et al., 2015 p.188). As a researcher one draws the analytical conclusions by creating patterns and links between concepts and ideas from the collected data and/or the existing theoretical base. This makes content analysis a good tool for generating theories. Content

analysis is conducted with a quite straightforward procedure. Firstly, one has to select criteria from the selection of collected data and existing theoretical knowledge based upon the research questions of the thesis. The relevant material is then grouped into common themes and with links and patterns that can answer the researcher's research questions. Once the factors are established, matrixes or tables can be used to display the variation in the data in a structured manner. From these one can draw results of the research and find similarities and differences in the collected data (Easterby-Smith et al., 2015 p.189). The analysis was fully structured in accordance with content analysis in order assure coherence throughout the thesis, but also to offer a structured but flexible way of analyzing qualitative data.

#### 2.4.5 Research Quality

In order to assure good research quality the authors must take several aspects into consideration. But as stated by Easterby-Smith et al., (2015 p.124) if the author is reflexive and transparent in his research the end results are seldom poor. By including all the information collected and the way on which we approached gathering the data in the paper as well as how we used it we were being as transparent as possible. In addition we highlighted the most important steps throughout the thesis to make it easier for other scholars to replicate the study (Easterby-Smith et al., 2015 p.214).

If the thesis and most importantly the analysis is systematic and thorough it is more likely to result in valid results. The author should evaluate, contrast and integrate the findings by creating clear patterns and themes in the analysis. It might be tempting to remove negative results during the data collection but it is important to include it, both to generate credibility and stronger theories that can be developed in future studies (Easterby-Smith et al. 2015 p.215). In addition to these points, full disclosure in the data collection with the interviewees assured both credible and relevant results.

#### 2.4.6 Research Ethics

There is a growing concern within the world of business administration research to use ethical codes whilst conducting research (Easterby-Smith et al., 2015 p.122). These concerns have for a long time been present in other fields such as psychology and medicine since the outcome of the data could jeopardize interviewees' health or even lives. There is no presence of mental illness or death in the field of business administration however several universities has over the years started to put up codes of conduct or rules of ethics in order to not harm companies or individuals (Easterby-Smith et al., 2015 p.122).

Bell & Bryman (2007) in Easterby-Smith, et al. (2015) has identified ten principles, which we intend to follow in this thesis in order to assure ethical treatment for all parties. We hereby declare that we:

1. "Ensure that no harm comes to participants"
2. "Respect the dignity of research participants"
3. "Ensuring a full informed consent of research participants"
4. "Protecting the privacy of research participants"
5. "Ensuring the confidentiality of research data"
6. "Protect the anonymity of individuals or organizations"
7. "Avoid deceptions about the nature or aims of the research"
8. "Declare of affiliations, funding sources and conflicting interests"
9. "Honesty and transparency in communicating about the research"
10. "Avoidance of any misleading or false reporting of research findings"

And to assure that these ten steps were followed we presented some measure that we took in this research:

1. We inform the interviewee in the initial email exactly what will be done and to what purpose; we also inform them that it is of scientific interest only.
2. We send the interview transcript a couple of days before the interview to each interviewee so that they get a chance to not answer them if they like.
3. We thereby assure that the interview is voluntary and that the interviewee does not feel forced to answer the question.
4. We ask the interviewee for the consent to agree on being recorded during the interview.
5. We record and transcribe the interviews to assure nothing is misheard, forgotten or overseen.
6. We inform the interviewees where the recordings will be stored and that they will be deleted once the thesis is finished.
7. We inform the interviewees that we will quote them on their statements.
8. We do not encourage anonymity to assure transparency in the research but if the interviewee asks to be anonymous we will answer his or hers request.

With these measures we assured that our research stays as ethically correct as possible.

### 3 Frame of reference

#### 3.1 Definition of a game

A game is considered to have a collection of multiple necessary conditions. When a combination of these necessary conditions is combined a game emerges (Juul, 2003). There are an abundance of definitions explaining a game but they all include a systematic and experiential component. The systematic component describes how the game is constructed, and the experiential component describes the human involvement in the game (Huotari & Hamari, 2016; Huotari & Hamari, 2012). Furthermore, the conditions of a game can also be divided into three different levels of abstraction. The first level of abstraction is common to all games. It includes the systematic condition where the game is constructed by several sets of mechanism and actors, and also the experiential condition, which explains that a game needs at least one active player (Huotari & Hamari, 2016). The second level includes game conditions that are characteristic to games but are not evident in every game. Systemic components in this level includes for example rules, uncertain outcomes and conflicting goals. These are the game design elements (Huotari & Hamari, 2016). Experiential components in the second level are for example hedonic experiences, gamefulness, mastery and suspense. The third level of abstraction includes conditions that are to be unique to all games, however there are no elements entirely unique to games. Since a game emerge in a combination of conditions it is not surprising that there are no systemic conditions unique to games (Huotari & Hamari, 2016). Likewise, no experiential condition unique to games is identified. This is unexpected since it would be difficult for anyone to identify when a game has emerged from a combination of several fundamental conditions if there are no experiential conditions unique to games.

Gamefulness has however been introduced to describe such a unique condition (Huotari & Hamari, 2016). It is important to notice that gamification is related to games, and not to play or playfulness (Deterding et al., 2011). Caillois (2001) concept of *paidia* and *ludus* makes a distinction between games and play. *Paidia* (playing) refers to a more loose form, and improvisational recombination of behaviors and meanings (Caillois, 2001). *Ludus* (gaming) describes playing organized around rules, a competitive strive toward goals, winners and losers, and this usually manifests itself around video games (Deterding et al., 2011). Playfulness relates to *paidia* activities, while gamification, or gamefulness apply to *ludus* activities (Lucero, Karapanos & Arrasvuori, 2014; Hamari & Koivisto, 2015).

Gamification has in recent years made use of game-design elements such as points, achievements, levels, and intrinsic rewards in non-game contexts in order to increase user engagement and stimulate behavior. As a result of that, a gamified experience has leaned more towards formal play of *ludus* were the design elements has focused on rules and goal-oriented play (Lucero et al., 2014).

Playfulness and gamification are then located at opposite ends of the play continuum, however, they both stem from the same origin - video games (Lucero et al., 2014).

### 3.1.1 Gamification Defined

No matter what type of game, what genre or technical complexity they all share four defining traits: a goal, rules, a feedback system and voluntary participation (McGonigal, 2011). The goal of the game is the desirable outcome the player tries to achieve. The goal provides the player with a purpose and focuses their attention (McGonigal, 2011). The rules of a game are in place to put limitations on the player and how they achieve the goal. Creativity and strategic thinking is fostered since the game remove or limit the obvious ways of accomplishing the goal. The feedback system, expressed in points, levels or progress bars for example, informs the player on how close they are on achieving the goal. The feedback system gives the player a promise that a goal is achievable, and motivates to keep on playing. The last trait, voluntary participation, means that the player playing the game accepts the goal, rules and the feedback. The player has the freedom to enter or leave the game whenever one feels doing it which will make sure that the deliberately stressful and challenging game is experienced as a safe and enjoying activity (McGonigal, 2011). The four traits defining a game may seem shallow since it lacks all the things one may first associate with a game; graphics, interactivity, a narrative, competition, rewards, winning and losing are examples of things that first comes to mind when thinking of a game (McGonigal, 2011). These are clearly features for a lot of games, but they are not defining features, what defines a game are instead the four defining traits. Everything besides the four traits is an attempt to reinforce or enhance the four traits (McGonigal, 2011). A good story for example makes the goal more exiting. The player is more motivated when there are scoring metrics as a feedback system.

In the matrix below Deterding et al., (2011) clearly distinguish gamification from other forms of games or playful designs. The x-axis differentiates whole games from using parts of game elements and the y-axis makes a difference between playing and gaming.

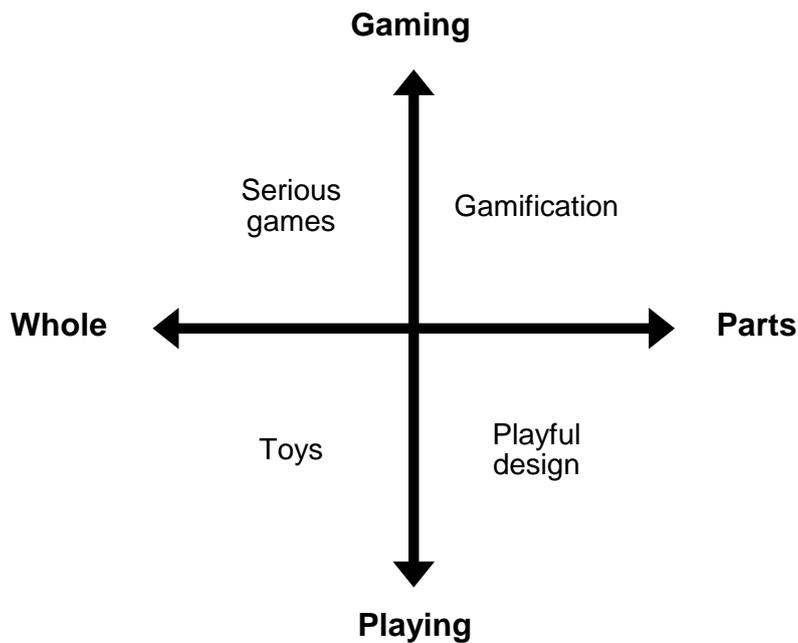


Figure 1 (Deterding et al., 2011)

We described a game to be comprised of different rules, feedback systems, choices and strive towards a goal. These are things that do not imply *play* (Deterding et al., 2011). A serious game is a sub category of games, and the major difference between a game and a serious game is in the goal, where in a serious game, the goal is often positioned outside the game. Serious games have long been used in different training environments whether it might be in a school environment, the military or in medicine where they might simulate an operation. As with serious games, a toy is a whole game but lean towards a more free form of playing without rules, goals and feedback system that makes up a game. Playful design has the same form of free playing as toys, but it is not a whole game, instead only some game elements are used. Finally, in the upper right corner of the matrix one finds gamification. Gamification can be confused with playful design, but the difference lies in the clear goals, feedback system and choices that are associated to games and gamification (Deterding et al., 2011).

### 3.2 Participants in a Gamified Experience

To have an understanding of the different stakeholders in a gamified experience is of greatest importance for it to be a successful gamified experience. There are four parties that contribute to the gamification experience: designers, players, spectators and observers (Robson, Plangger, Kietzmann, McCarthy, & Pitt, 2015a). *Designers* are the creators of the gamified experience, they also manage and maintain it. *Spectators* are individuals who are not directly actively participating the experience but have the possibility to influence the experience, for example friends of the player. *Observers* are people who are aware that the gamified experience is taking place but have no impact on it. Finally, and most importantly,

we have the actual players who participate in the gamified experience. Often, the connection between the designer and the player is the only one taken into consideration. It is however important to highlight that there are other parties, spectators and observers, that can affect or be affected by the gamified experience (Robson et al., 2015a).

### 3.2.1 The player

Of the four different stakeholders, the players are the most important ones to consider. In order to create an engaging experience for the player one must consider that individuals vary in what like and dislike, this variability in what individuals treasure is difficult to recognize but at the same time a necessity for a successful gamified initiative (Robson et al., 2015a). A work made by Bartle (1996) is framework that has been used frequently to understand different player types in a game.

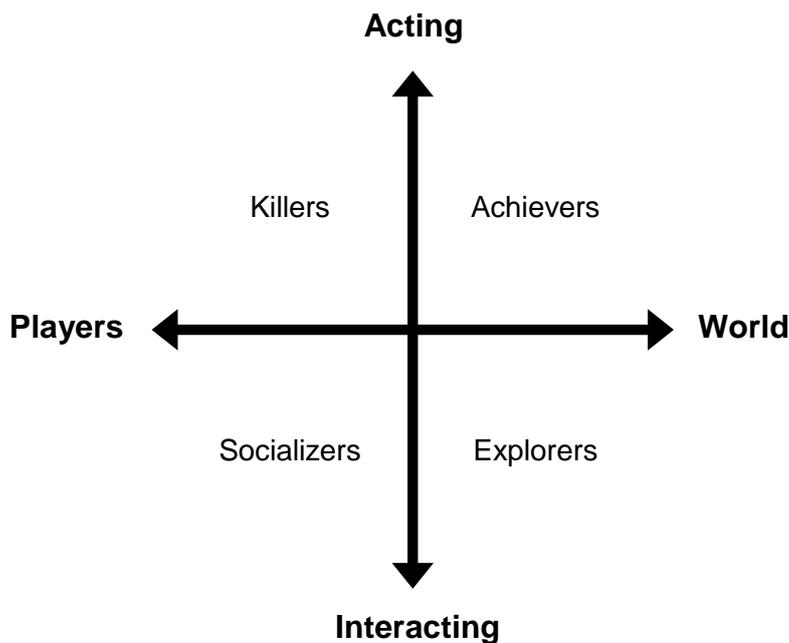


Figure 2 (Bartle, 1996).

The majority of players involved in a game fit into one of the four categories: Killers, Achievers, Socializers and Explorers (Bartle, 1996). The player's interest in a game represents the axes of the graph. The X-axis span from an attention on players to an attention in the environment, whereas the Y-axis span from interacting at the bottom to acting in the top. *Killers* are the players who take interest in acting on other players. Winning over others is not enough, they want to demonstrate superiority, and that others identify this and shows admiration (Bartle, 1996). *Achievers* are players who like acting on the world, they have interest in mastering the game and making the game do what they want it to do. They feel a need to achieve, win and show pride in their formal status (e.g. levels in

the game) in the game and how fast they reached it. *Socializers* are the players that find it most important to interact with other players in the game. They take pride in the friendship with others and the game world is looked upon as just a setting, with its participants within that make it most interesting (Bartle, 1996). *Explorers* are the players that are interested in interacting with the world, they want the game to surprise them and want to “break new grounds” in the game. Explorers are proud of the knowledge they have in a games finer points (Bartle, 1996).

### 3.2.2 Player types in Gamification

Based on Bartles (1996) different player types, Marczewski (2015) developed a new set of player types adapted for gamification, and actually, the work was collaboration between Marczewski and Bartle. The extended player types model includes six types of players and is connected to SDT and the RAMP framework, which will be described in the next section (Marczewski, 2015). The six different player types can be divided in whether they are driven by intrinsic or extrinsic motivation.

### 3.2.3 Intrinsic Players

#### **Socializers**

The socializers are described the same as in the original player type model by Bartle (1996). These are the players that values interaction with others in the gamified experience. The internal social networks within the gamified system will be highly appreciated and as a result, they are by far most motivated by the social connection (Marczewski, 2015).

#### **Free spirits**

The free spirits in the gamified system can be divided in to two subtypes. The first one, the explorer, strives for a personal journey throughout the gamified experience, they want to explore the experience and not feel any restrictions in there way forward (Marczewski, 2015). The second subtype of the free spirits, the creators are stimulated by building new things and will most likely have a fancy avatar and a lot of personal content. The free spirits (explorer and creator) are motivated by self-expression and autonomy in the gamified experience (Marczewski, 2015).

#### **Achievers**

The achievers are the players who want to excel and achieve in the gamified experience. They seek for challenges to overcome. Different from the achiever in Bartle’s original player types, the achiever in Marczewski (2015) player type model do not feel the need to show of their skill to others. The achiever will be

pleased by a gamified experience that enriches them and lead them to mastery (Marczewski, 2015).

### **Philanthropists**

The philanthropists seeks to being part of something bigger than themselves, they want to give, but do not expect anything back. For example, the philanthropists are the type of players that reply to an endless amount of questions on forums just because they enjoy helping others (Marczewski, 2015). This type of players wants a gamified experience that enables them to enrich other and personally feel a sense of purpose (Marczewski, 2015).

#### 3.2.4 Extrinsic Players

##### **Players**

The players in the gamified experience are there to serve themselves. They are motivated by rewards and put all their effort in collecting rewards from the gamified experience (Marczewski, 2015). The player is similar to the intrinsic players but the difference lies in that they only do things if there is a reward to capture.

##### **Disruptors**

The disruptors feel a need to disrupt the gamified experience, either by themselves or via other players in order to cause a positive or negative change (Marczewski, 2015).

To know the players are essential when confronting the task of developing a gamified experience. Knowledge about what the target group experience as motivating and entertaining of a game is of greatest importance. However, one single player type cannot be applied to people, most of people have many of the traits but in varying degrees. The key then is to design a gamified experience that will stimulate the behaviors that will give the experience the most preferred outcome. The gamified experience should preferably appeal to the four different player user types, the experience should basically be meaningful, social and give the players freedom (Marczewski, 2015). The intrinsically motivated players should be focused upon since they most likely will return and add to the gamified experience.

### 3.3 Human motivation

#### 3.3.1 Self Determination Theory

Ryan & Deci (2000a) defines motivation as “to be moved to do something”. When there are no incentive or enthusiasm for doing something you are then by definition unmotivated. On the other hand, when you are motivated - you feel

energized and positive towards something. Motivation is also subjective to each and every individual; people have different amounts of motivation and different sorts of motivation. People are thereby different in the level of motivation, and the orientation of the motivation (Ryan & Deci, 2000a). The individuals underlying attitude and goal that results in an action then affect the orientation of the motivation. Individuals can therefore be motivated to do something for different reasons, and the level of motivation for doing something may vary. In the Self-Determination Theory by (Deci & Ryan 1985; Ryan & Deci, 2000a; Ryan & Deci, 2000b) they distinguish different types of motivation based on a variation in the intentions or goals that give rise to an action. The greatest distinction is made between intrinsic and extrinsic motivation. Intrinsic motivation is a consequence of being motivated to do something for its own amusement. Extrinsic motivation is when you do something for a separable outcome, or an external benefit.

The Self-Determination Theory by Deci & Ryan (1985) is considered to be one of the most influential cognitive theories. The Self-Determination Theory (SDT) suggest that people from the start are proactive and holds a powerful internal desire for growth, however, the external environment needs to support this, and if not, the intrinsic motivation will be thwarted (Ryan & Deci, 2000; Werbach & Hunter, 2012). Three different innate physiological needs are postulated as when satisfied, produce a heightened self-motivation and mental health (Ryan & Deci, 2000b). *Competence*, or *mastery*, relates to an individuals ability to achieve something in the external environment. The feeling of competence or mastery gives confidence and a sense of wellbeing. *Relatedness*, explains social connection and interaction between family and friends. *Autonomy*, express an individuals need to have control on ones life, the control of being able to do what is meaningful and that are in line with ones own values. The Self-Determination theory is a major cause to why people plays games (Ryan, Rigby, & Przybylski, 2006; Siemens, Smith, Fisher, Thyroff & Killian, 2015).

The same *intrinsically* human needs just mentioned, is stimulated by games. People play games because they want do it, not because someone is forcing them to do it (Ryan et al, 2006; Werbach & Hunter, 2012). Simple games like Sudoku activates the intrinsic SDT theory. Which puzzle to solve, and how to do it is entirely up to the player to decide – *autonomy*; the player solved the puzzle – *competence or mastery*; the player can share his or hers success in solving the puzzle with friends – *relatedness* (Werbach & Hunter, 2012). Gamified experiences should preferably use the same intrinsic motivators. Levels and points for example, can be translated to *competency* or *mastery*. The player's opportunity to make choices and the experiences apprehended as they progress in the gamified experience translates to *autonomy*. Finally, *relatedness* can manifest itself in the social interactions one can exercise in a game via for example sharing the score, or the display of badges won in a game to friends (Werbach & Hunter, 2012).

### 3.3.2 RAMP Framework

The three motivational drivers explained Ryan and Deci (1985) has been used as a foundation for Marczewski (2013) work when he applies these motivational drivers in a gamified setting. Marczewski (2013) establish four motivational drivers; relatedness, autonomy, mastery and purpose (RAMP). The motivational drivers are then connected to Marczewski (2015) six different player types with examples of triggers.

Intrinsic

Motivational Drive: **Relatedness**

Player Type: **Socializer**

Examples of Triggers: **Social Status, Social Connection and Belonging**

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Motivational Drive: **Autonomy**

Player Type: **Free Spirit**

Examples of Triggers: **Creativity, Choice, Freedom and Responsibility**

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Motivational Drive: **Mastery**

Player Type: **Achiever**

Examples of Triggers: **Learning, Personal Development and Levels**

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Motivational Drive: **Purpose**

Player Type: **Philanthropist**

Examples of Triggers: **Altruism, Meaning and Reason**

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Extrinsic

Motivational Drive: **Rewards**

Player Type: **Players**

Examples of Triggers: **External Rewards, Achievements and Leaderboards**

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Motivational Drive: **Change**

Player Type: **Disruptors**

Examples of Triggers: **Voting, Anarchy and Anonymity**

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Figure 3 (Marczewski, 2013; Marczewski, 2015)

#### **Relatedness**

Peoples desire to have a social connection and interaction with others is the fundamental aspect of relatedness (Ryan & Deci, 1985). Marczewski (2013) extends this explanation by putting relatedness in a gamified setting. Relatedness in a gamified setting is for example social status and the valuable interactions individuals have within gaming communities. Loyalty and engagement towards a gamified experience is often kept if the players enjoy the interactions with each other. This is important since some day the players may get tired of the gamified experience but instead of abandoning the gamified experience, they stay because they value the interactions.

*Relatedness is linked to the Socializer* in the player type framework, the Socializer feels a need for social status, social connection and belonging, and this is stimulated and explained by the concept of relatedness.

### **Autonomy**

Marczewski (2013) explains autonomy almost identical to Ryan and Deci (1985). The fundamental part of autonomy is freedom, when people experience that they are being controlled or restrained they will lose motivation.

*Autonomy is linked to the Free Spirit* in the player type framework, the Free Spirit feel a need for creativity, choice, freedom and responsibility, this is stimulated and explained by the concept of autonomy.

### **Mastery**

Marczewski (2013) use the expression mastery to describe the journey of being good at something. The same concept is used in Ryan and Deci's (1985) work, but they choose the expression competence, instead of mastery, but they describe the same phenomena. The journey towards mastery is related to the concept of flow, which describes the that for individuals to be motivated their needs to be a balance between the increasing skill level is in direct proportion to the level of challenge (Csikszentmihalyi, 1991). As a result, if the players in a gamified experience do not feel that they are being challenged in relation to their skill level they will be demotivated.

*Mastery is linked to the Achiever* in the player type framework, the Achiever feel a need for learning, personal development and levels, this is stimulated and explained by the concept of mastery.

### **Purpose**

Purpose is the final element in the RAMP framework and is described by Marczewski (2013) as individuals need for doing meaningful actions. Reason, and a greater meaning to an action are important. Altruism is often used synonymously with purpose were individuals find enjoyment in putting others in front of themselves.

*Purpose is linked to the Philanthropist* in the player type framework, the Philanthropist feel a need for altruism, meaning, and a reason why, this is stimulated and explained by the concept of purpose.

The extrinsic player types, *players and disruptors* are motivated by rewards and change respectively. The players will do everything they can do to grab rewards from the system, and they only think about themselves. The disruptors feel a need

to disrupt the gamified system, either directly or indirectly via others in in order to create an either positive or negative change (Marczewski, 2015).

### 3.3.3 Flow Concept

In gamification, intrinsic motivation is described by the concept of flow. The concept of flow is explained by Csikszentmihalyi (1991), as a psychological state that creates an heightened focus and concentration, loss of self-consciousness, a feeling that time flies, and a balance between boredom and frustration during the activity. The activity in itself is then intrinsically rewarding (Zinger, 2014). The state of flow is a major consideration game developers take when designing their games today to make the players engaged. One of the most popular games in history, Pac-Man, is a great example of good game design. Pac-Man has been proved to engage players in a state of flow (Siemens, Smith, Fisher, Thyroff & Killian, 2015).

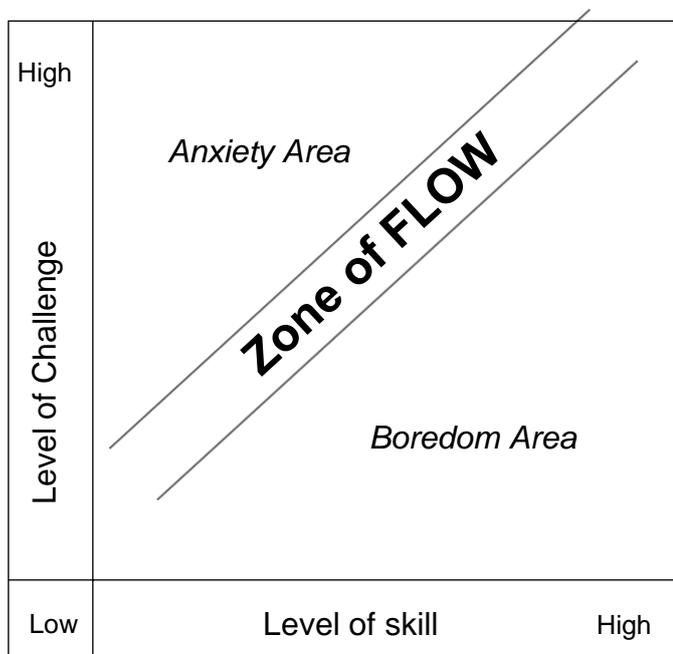


Figure 4 (Zichermann & Cunningham, 2011)

### 3.3.4 Usage of Intrinsic Motivation

Today, gamification designs are mostly focused on incentives for extrinsic motivations. This is a concern since users already intrinsically enjoy games, and thereby, extrinsic incentives may diminish the intrinsic motivations the consumer had from the start (Bittner & Shipper, 2014). Game-design has an important role here, since the game-elements incorporated in the game may focus on extrinsic rewards that disrupt the original intrinsic motivations by the players. This is also why gamification is different from loyalty programs, even though they might be pursuing the same goal, loyalty programs most often evokes extrinsic motivations (Hamari, 2013). For example, airline companies is a major user of loyalty programs

where frequent fliers are rewarded with points that can be exchanged for economic benefits (e.g. hotel nights, free flight) (Deci, Koestner, & Ryan, 1999). However, intrinsic motivations for a gamified service may be enhanced by extrinsic motivation in the game design. Avatars, storyline, choices and feeling connected, are examples of intrinsic motivational incentives that could be combined with extrinsic incentives such as points, rewards, bonuses and leaderboards because it adds to the overall flow and enjoyment of the gamified experience (Bittner & Shipper, 2014). With this said, gameful design should however strive for evoking intrinsic motivations. Extrinsic motivations could be used to engage and motivate consumers, but only as a tool for promoting the intrinsic motivation in which the activity itself becomes the reward (de-Marcos, Domínguez, Saenz-de-Navarrete, & Pagés, 2014)

### 3.4 Game Design Frameworks

#### 3.4.1 MDE Framework

The MDA (mechanics, dynamics and aesthetics) framework developed by Hunicke, LeBlanc and Zubek (2004) is an approach for understanding games. The framework bridges the gap between game design and development. The framework formalizes the use of games by dividing them into their distinct components: Rules -> System -> Fun and constitute their design counterparts, which is the Mechanics -> Dynamics -> Aesthetics. These components are what creates the gamified experience (Hunicke et al., 2004). The mechanics in the framework is causing dynamic system behavior from the lens of the designer, this cause a particular aesthetic experience. In the eyes of the player, the aesthetics sets the tone, which stems from the dynamics and eventually operable mechanics (Hunicke et al., 2004). Instead of aesthetics, emotions will from now one be used to describe the last component in game design since emotions better resembles a gamified setting with emotional, or engagement outcomes from individuals, and therefore the MDE framework (Robson et al., 2015b).

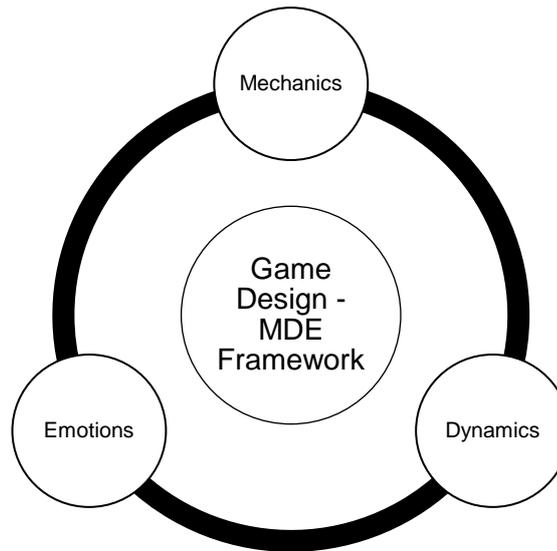


Figure 5 (Robson et al., 2015b; Hunicke, LeBlanc, & Zubek, 2004)

## Mechanics

The designers create the mechanics; they specify the rules, the context and setting, the types of interactions, boundaries, and goals of the design (Robson et al., 2015b; Hunicke et al., 2004). The mechanics remain constant throughout the experience and do not change from one player to another. Take chess for example, decisions about mechanics include the number of pieces, how they move, and how winners are decided. There are essentially three different types of mechanics: setup-, rule- and progress-mechanics. The *setup mechanics* manages the environment of the gamified experience; what objects are needed, the setting and how the objects are distributed among the different players (Elverdam & Aarseth, 2007). The setup mechanics decide for example whom the player plays against, is the competitor internal or external, or known or unknown (Robson et al., 2015b). The *rule mechanics* constitutes the concept and goal of the gamified initiative (Elverdam & Aarseth, 2007). They communicate what actions that is acceptable, as well as putting limitations (time restrictions) in order to create a sense of pressure on the player (Kelly, 2012). There are a variation of rule mechanics, some are deterministic and produce the same results when the player contributes with the same input. On the other hand there are non-deterministic rule mechanics, this is especially evident when elements of chance is involved. The effect, when a specific condition is being met (completing levels) is an objective-based rule mechanic (Robson et al., 2015b). Finally, the *progression mechanics* are instruments that the designer use on the experience while it happens (Elverdam & Aarseth, 2007). These are important since they give proof that the gamified experience is taking place and that the player is progressing through the game. Progress mechanics could for example be virtual victory points such as progress bars, levels or scores (Robson et al., 2015a). Progression mechanics are in simpler words the feedback system to the player, choosing the appropriate progression mechanics are

important since they hopefully increase the chance that a certain behavior of the player is repeated. Besides ordinary victory points, social rewards are effective, they signal the social standing within a community, examples of social reward points could for example be badges, trophies and leaderboards (Robson et al., 2015b). Important to consider regarding the progression mechanics, are what type of achievement rewards to be distributed to the players, the rewards must be likeable and desired by the players. Furthermore, care must be taken in the distribution of intrinsic and extrinsic rewards as well as not give too many rewards since they lose their value - having the right balance is a key (Robson et al., 2015b).

The mechanics are the foundation of any gamification experience since they decide the key parties, how they interact, how to win or lose, and where and in what setting the experience takes place (Robson et al., 2015b). The gamified experience is structured by the mechanics, but is not enough for creating a successful experience. The dynamics and emotions spring from the mechanics and animate the experience. There are thereby an interdependency between the mechanics, dynamics and the emotions, this assist the game-designer on eventual changes that needs to be done on the mechanics in order to follow the goals set by the initiator of the gamified experience (Robson et al., 2015b).

### **Dynamics**

The dynamics in the MDE framework are the player behaviors that result from the gamified experience. The designer creates the mechanics; the dynamics however is a result of how the player follows the mechanics. They are the interactions and strategic actions that occur during the gamified experience (Camerer, 2003). The dynamics are hard to predict and could result in undesired behaviors and outcomes (LeBlanc, 2004). As a result, the greatest challenge for the designer is to predict the outcome of the dynamics and to create mechanics accordingly (Robson et al., 2015b). For example, in poker, the mechanics represents the shuffling, trick taking and betting. The dynamics that can emerge from this are cheating, bluffing and bragging for example (Robson et al., 2015b). Furthermore, the presence of spectators and observers may affect the player and thereby the dynamics. When players know they are being watched, they tend to be more competitive and not willing to quit or concede in the game (Robson et al., 2015b).

### **Emotions**

The emotions are the end product of the mechanics and dynamics in the gamified experience, from the player's perspective; the emotions emerge by how the players interact with the mechanics, which in turn generates the dynamics (Robson et al., 2015b). Different types of emotions are triggered throughout the gamified experience (Robson et al., 2015b). But research shows that the most essential emotion to be triggered by game designers is "fun" (Sweetser & Wyeth, 2005).

Positive emotions and “fun” may take various forms; surprise, wonder, amazement and excitement are examples. However, to find the right balance and keep the player engaged, negative emotions must be incorporated.

The MDE framework presents the three interdependent gamification principles and how they can be operationalized and aligned together in order to create favorable gamification experiences for the player. Changes in one of the principles affects the other two, and as a result, create a new experience. The framework also describe differences in how the game designer and player perceive the gamification experience, the designers focus is to have control over the experience with the assistance of the mechanics, after that the focus is directed towards the dynamics and lastly the emotions (LeBlanc, 2004). Conversely, for the player, everything starts with the emotions the gamified experience evokes. When developing the gamified experience it is thereby of greatest importance that the game designers start from the player’s perspective and not the other way around. The emotions and dynamics that emerge from the player should decide the mechanics (Robson et al., 2015b).

#### 3.4.2 DMC Pyramid

The DMC pyramid is built around three categories of game elements with a lower amount abstraction the further down the pyramid (Werbach & Hunter, 2012). The game elements are the ones who builds up the game. Synthesizing and integrating the three different elements in the DMC pyramid is a key task for the gamification designer. However, employ each and every component in the three categories is not going to happen, instead the key is to have an understanding about them and thereby choose the right elements and items to match the overall objectives of the gamified experience. All three categories; dynamics, mechanics and components are connected to each other.

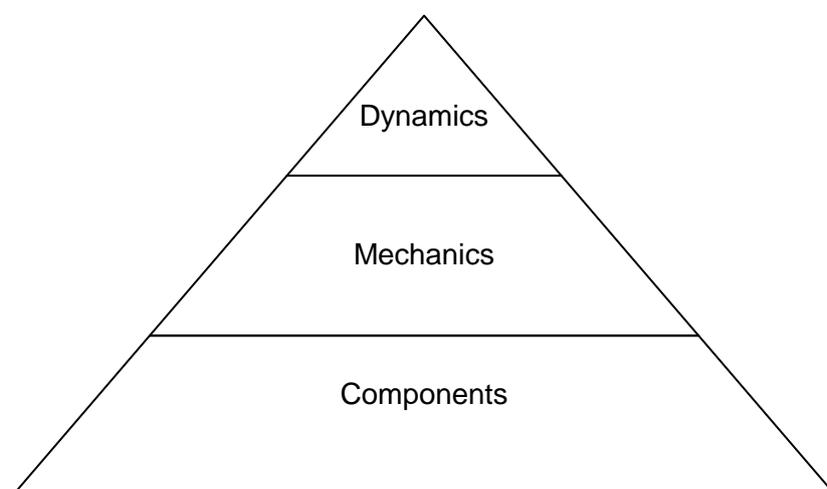


Figure 6 (Werbach & Hunter, 2012)

## Dynamics

On top of the pyramid, one finds the dynamics, which describes aspects of a gamified experience that do not explicitly enter the game but needs great amount of consideration and supervision throughout the process.

The major game dynamics to consider are (Werbach & Hunter, 2012):

<b>Constraints;</b> which can limitations and forced trade-offs
<b>Emotions;</b> competition, curiosity, frustrations and happiness for example
<b>Narrative;</b> a continuous and persistent storyline
<b>Progression;</b> a player's development in the gamified experience
<b>Relationships;</b> the social interactions that occur which ultimately lead to friendship, status and altruism for example

## Mechanics

Below the dynamics in the DMC pyramid you will find the mechanics of the game. The mechanics function in the gamified system is to accomplish and realize the dynamics (Werbach & Hunter, 2012). They represent the processes that drive player action and engagement forward. For example, a reward (mechanic) may turn up for the player and this in turn stimulate curiosity and happiness (dynamic) for the player.

Examples of game mechanics could be (Werbach & Hunter, 2012):

<b>Challenges;</b> tasks that require effort from the players point of view to solve
<b>Chance;</b> random elements incorporated in the gamified system
<b>Competition;</b> competitive environments with winner and losers
<b>Cooperation;</b> goals accomplished via teamwork among the players
<b>Feedback;</b> instant and feedback on how the player progressing in the game
<b>Resource acquisition;</b> the acquirement of valuable items
<b>Rewards;</b> specific actions and accomplishments are benefitted
<b>Transactions;</b> between players, or via intermediaries, trading is an option

## Components

The last category in the DMC pyramid and with lowest level of abstraction you find the components. In the gamified experience the components are in a higher degree a more clear-cut form of the dynamics or mechanics. For example, a player trying to solve a challenge (mechanic) can earn points (components) if he or she solves it. During the way, the player receives feedback and getting closer to the reward (mechanics), and this could be related and connected to the overall narrative (dynamics) of the game (Werbach & Hunter, 2012). The most frequently used game components are points, leaderboards and badges (PBLs) (Hamari, Koivisto &

Sarsa, 2014; Bittner & Shipper, 2014). PBLs should be considered at the start of every gamification initiative since each element is recognized and known by the general public. PBLs major function is to give the player information about their progress in the game. However, PBLs may not be enough for a successful gamified experience; the popular game Super Mario for example reached an increased popularity when the game designers decided to take away the PBLs elements in the game (Bittner & Shipper, 2014). Below, some examples of components are described.

<b>Avatars</b> ; visual representations of a player’s identity and character
<b>“Boss fights”</b> ; the end culmination of a level, which is a particularly difficult challenge
<b>Combat</b> ; during the journey to the “boss fight” for example, small and short-lived combats may approach the player
<b>Content unlocking</b> ; some specific things in the gamified experience that is only available when a players has reached a certain objective
<b>Gifting</b> ; the freedom in sharing resources or objects with others in the gamified experience
<b>Social graphs</b> ; visualization of players social network and interactions within the gamified experience
<b>Teams</b> ; in-game groups of players cooperate to accomplish goals together
<b>Virtual goods</b> ; assets in the gamified experience that have perceived or real money value

Besides the components briefly explained above, PBLs and levels are more thoroughly described below. PBLs and levels represent the game components that are used most frequently in gamified experiences.

### Points

Fundamentally, points are in place to inform the player or players about the score. A player with 10 points, in comparison with another player with 5 points describes that either the player with more points has played longer or have done it more successfully. Points also communicates on what is needed to reach the next level for example, thereby they may define the progress from beginning to end in a game (Werbach & Hunter, 2012). The link between progression in a game and extrinsic rewards can easily be communicated via points - “If you reach twenty points you will get this”. Instant and explicit feedback is a key in every game design; points can be used to serve this purpose by giving the player feedback on how he or she is advancing in the game. Points can also be used to illustrate scores between players; this can serve as an indicator of status for a player within the gamified experience. Furthermore, points serve as an information provider to the game designer (Werbach & Hunter, 2012). Points earned by players in a game can be

tracked, stored and be of help to the game designer in understanding to what is happening in the gamified experience. Information that is important for the game designer could for example be; are the players challenged in the right way? Are some levels too easy or too challenging? Is there somewhere in the gamified experience that player's leaves the game? And if so why?

To have an understanding of how one can use and implement points in gamified experience is an advantage. If the objective for the gamified experience is to encourage competition, then one option is to use points as scores between other users of the gamified experience (Werbach & Hunter, 2012). If the gamified experience objective is to make players feel mastery and progression, then use points as a constant feedback tool to the players, without showing how the player's score relates to each other.

Points can further be broken down into different point designs, and depending on the gamified experience one might use more than one experience at the same time. Below are some examples of point experiences.

**Experience points**, or XP, describe how the gamified initiator watch rank and guide their players (Zichermann & Cunningham, 2011). XP is earned for everything the player does in the gamified experience, and in most cases XP is not redeemable or goes down. XP is long term since it never maxes out and the player earn as long as he participate in the gamified activity.

**Redeemable points**, or RP, are points that are used within the gamified experience in exchange for something. They are earned and then cashed, this is in social games and loyalty programs called "earned and burned" (Zichermann & Cunningham, 2011). The term "earn and burn" speaks for itself in terms of what the is the purpose of an RP point experience. RPs are significant in virtual economies were they take the form of "cash", "coins" or "bucks".

**Skill points**, or SP, are sub-points to XP or RP. Skills points are given to players that complete some alternative task, apart from the actual core tasks (Zichermann & Cunningham, 2011).

**Karma points**, or KP, are points that are meant to be given away and not kept. Game designer include KPs in the gamified experience when they want to create a behavioral path for altruism and reward (Zichermann & Cunningham, 2011). The idea is to give an altruistic feeling of the interaction and in the same time minimize the tendency to game the system. For example, if the game designer wants the players to thank each other after a challenge they can give each other KPs, instead of gifts or virtual currency (Zichermann & Cunningham, 2011).

## **Badges**

Badges can be considered as a jacked up version of points and is essentially a visual portrayal of a specific achievement in gamified experience (Werbach & Hunter, 2012). The task of a badge in the most simple of circumstances is to show that you have reached a certain level of points or goal. In other cases, a badge exemplifies activities. The application Foursquare is a service that use badges as a way to signal to their users that they for example have “checked in at five places” and other similar things in their system.

Well-designed badge systems have five different motivational characteristics (Antin & Churchill, 2011).

First, a badge most distinct function is to serve as a goal-setting device, the badge should stimulate and challenge the **player** of the gamified experience to reach the goal. The game designer should set the goal just out of comfortable reach, because then they are most motivating (Antin & Churchill, 2011). Important to note here is that goal setting is most effective when the player in the gamified experience can follow their progress towards the goal, this can be done via points or progress bars for example.

Second, badges function as a way of guiding and educating the player in the gamified experience on what activities that are possible in the system. Social norms can also be incorporated in badges in a way that they serve as examples on what activates and interactions that are valued (Antin & Churchill, 2011).

Third, badges give players a reputation since the badges are visual representations of what the player has done or accomplished in the gamified experience (Antin & Churchill, 2011). By looking at other players badges one can for example see their interest and expertise level, and as a result, badges act as reputation symbols.

Fourth, badges are status symbols, in the sense that they communicate player's accomplishments (Antin & Churchill, 2011). The personal affirmation received by badges, and the interplay with status makes badges engaging both individually or in groups.

Fifth, and finally, badges serve as an identification marker of a specific group. Players with the same assemble of badges may create a sense solidarity and bind a group together because of their same sets of badges (Antin & Churchill, 2011).

In comparison with *points*, badges are more flexible in their usability; the game-designer has the availability to award badges for all kinds of activities. This makes the gamified service tolerant to a more diverse set of players, since players can have different interests, and thereby other badges in relation to other players even

though they play the same game. Furthermore, the simplicity in just collecting badges can be a drive for people and the aesthetic of a well-designed badge can also attract players (Zichermann & Cunningham, 2011).

### **Leaderboards**

Leaderboards of different sorts are seen everywhere, and for most people they need no explanation; they are in place to make simple comparisons (Zichermann & Cunningham, 2011). In a gamified setting, leaderboards provide the player with a summary of how he or she performs in relation to others. This can be a significant motivator for an individual since it is easy to see how for example a few more points will lead to an upward movement in the leaderboard (Werbach & Hunter, 2012). On the other hand, leaderboards may also have the opposite effect, in some cases a player will feel discouraged since they recognize how far they are from the player on top of the leaderboard.

Leaderboards can be implemented and operated in numerous ways in a gamified experience, it does not only need to be connected solely to one attribute, instead the game-designer makes a choice on what or which attributes and features they want to accentuate (Werbach & Hunter, 2012). Furthermore, a consideration needs to be taken in regards to your players, what type of leaderboard makes them engaging and motivated.

Two frequently operated leaderboards can be differentiated. The first one is the *non-disincentive leaderboard*. The non-disincentive leaderboard always puts the player in the middle of the visual leaderboard, no matter where the player is in the total of all players ranking (Zichermann & Cunningham, 2011). The position is shown with some players below, and some players above, that portrays how much points for example that the player needs to climb in the leaderboard. However, if the player is close to the top, the leaderboard should show this directly (Zichermann & Cunningham, 2011).

The second type of leaderboard is the *infinite leaderboard*. This shows the complete standing of the leaderboard, from first to last person. This type of leaderboard often has the capability to divide itself into local, social or a global variant of itself. For example, the local version of the leaderboard gives the player the opportunity to see where he or she ranks in the adjacent area.

### **Levels**

Levels in a gamified experience visually communicate to players where they stand in the game. Levels is game component that most people has been in contact with, but there are a things that need to be considered in regards to levels and their implementation in a gamified experience. The difficulty of levels should not take a linear form; instead difficulty should increase (curvilinear) the more players play

the game, and so, their skill level increases (Zichermann & Cunningham, 2011). This is in line with Csikszentmihalyi (1991) *flow-concept*, where individual's experiences flow when there are a balance between boredom and frustration during a task. Difficulty should thereby increase exponentially by each level (Zichermann & Cunningham, 2011). In connection to levels, progress bars are often evident to display, in percentage form, how close the players are to achieving the level. This feedback works well for motivating the players in continue participating in the gamified experience. All in all, levels should be easy to grasp for the players, and the gamified experience should have the availability to add new levels if needed. Furthermore, and as stated, the levels must be tested before introducing the gamified experience to the public in order to find the right balance in the degree of difficulty (Zichermann & Cunningham, 2011).

### 3.5 Ethical Considerations

Ethical and moral issues in an online environment are something that needs to be considered. People spending countless of hours online, and increasingly, offline behaviors and tasks are now moved into the digital world and the mobile phone. As with any other digital endeavor, gamification must take legal and ethical considerations. If the gamified experience should for example be implemented in numerous countries outside its origins, it is important to consider that laws of other countries since they might differ. An adjustable gamified design is then appropriate in order to have the possibility to adapt the gamified design depending on which country, and their respective laws and policies (Kumar and Herger, 2013). Data privacy is also a hot topic in the online world, and the privacy laws vary worldwide. European law for example, disallows collection, processing and the use of individual data (Kumar and Herger, 2013). For it to be acceptable, the people using the gamified experience must give permission, or opt-in to have their data collected. Default settings need to be implemented so that users of the gamified experience perform an explicit action where he or she agrees that their data is being collected and used. Another more specific ethical concern in a gamified experience is the risk of people cheating within the system. The gamified experience needs to be built with an ulterior motive that players will try to cheat the system and as a result build cheat protection were it might be a risk for players to cheat (Kumar and Herger, 2013). Building a digital endeavor raises ethical and legal considerations and one should not shy away from them since they might lead to major dilemmas if they are disregarded.

### 3.6 The Parts of the Gamification Framework

*In this section the theoretical framework is summarized into a framework that describes the processes of how a gamification experience is created. It explains the processes from start to finish. Each component is described in-depth throughout the theoretical framework, then summarized in the framework and finally compromised in the visual framework. If you want to learn more about a specific step, simply follow the route back into the theoretical framework in order to get in-depth knowledge on each individual step.*

#### **Understand gamification and define business objectives**



Define business objectives, what is it that you want to achieve? Gamification can alter and direct behavior, and drive engagement. Do you understand what gamification is? And how it relates to other sorts of games and play?

The first thing to consider when thinking about realizing a gamification initiative is to have a sound understanding of your goals. Goals for the gamified experience could be increased customer engagement or retention and building of brand loyalty (Werbach & Hunter, 2012). When the goals are decided, the cherished target behaviors of your players should be decided. What type of behavior or increased engagement is it that one wants to provoke is a question that needs to be answered. The target behaviors preferably also have the opportunity to be measured. Since gamification runs on software algorithms you can translate the desired behaviors into quantifiable numbers and results (Werbach & Hunter, 2012). During the development process of the gamified initiative it is important to return to the goals in order to stay focused on what is importance. Be also clear about, and understand what gamification is in relation to other sorts of games or play. Figures 1 separates gamification from other forms of games and play and will help in the process of understanding gamification.

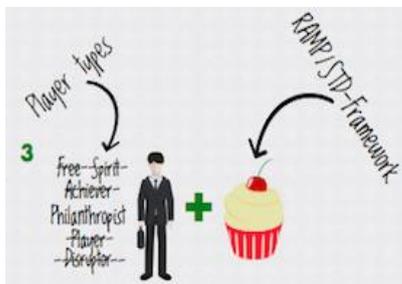
#### **Identify your target group and understand what motivates them**



The players are the most important aspect to consider. Understanding them is key. What triggers them? What motivates them? And what makes them engaged?

In this stage you need to identify and get an understanding of the target group that

are about to take part in your gamified experience and also what motivates them. Intrinsic and extrinsic motivations is important to consider in this stage, which are the motivators that in the best way motivates the players in your specific gamified experience (Werbach & Hunter, 2012). What makes this troublesome is that all users are not the same; one may want to build the experience so it is appropriate for more than one target group of players. In terms of games and gamified experiences you often have the chance to amuse more than one specific segment since games entails making choices. As a result, users could take different paths in a gamified experience that involves different experiences and thereby appeal to different types of players. To help you with this, use Marczewskis (2015) six different player types adapted for gamification (Socializers, Free Spirits, Achievers, Philanthropists, Players or Disruptors) to picture your players.

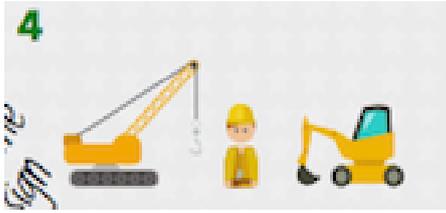


Identify the player types and match them with the right motivational drivers and triggers from the RAMP framework.

When have identified the player types for your specific gamified experience you need to match the player types with their respective motivational drive and what makes them engaged. Marczewski (2013) developed the RAMP model for this purpose; the model is based on Ryan and Deci's (1985) influential Self-determination theory. Marczewski (2013) adds the motivational drive *purpose* in the RAMP model besides Ryan and Deci's (1985) original three motivational drivers (relatedness, competence/mastery and autonomy). The motivational drivers are explained in the RAMP model and connect each motivational drive to a player type. For example, you identify your target group to be socializers, then they most certainly will be motivated and engaged by a feeling of relatedness in the gamified experience. Figure 3 connects all the different player types with their respective motivational drive.

To understand the players and their motivations is an essential part of a successful gamified experience and this should set the tone for the actual development and design of the gamified experience.

## Build the gamified experience



Time to build the gamified experience. Make sure you stick to the business objectives set from the start and carefully consider the previous steps. Especially, how can I build the gamified experience in best possible to make sure that it suits the players and their motivational drive.

Finally, everything needs to be tied together in order to build and finalize the gamified experience. Things to consider are for example; what is to be included or excluded in the gamified experience, and do I have the right skillset of the people developing the experience. The MDE and DMC framework are frameworks that facilitate the practical and actual development of the gamified experience. Both of the frameworks are great tools for a game designer for understanding games and their most important function is how the different parts of game design are integrated.

## Consider Journey



What about the journey the player takes in a gamified experience. Consider engagement loops and progression stairs that ideally lead players to a state of flow.

The actions in a gamified experience are best-described through different activity cycles. When thinking about a game it always has a beginning and most often an end, along the continuum from beginning to end there are a series of activity loops (Werbach & Hunter, 2012). Two types of cycles are established, engagement loops and progression stairs. The latter provides a macro perspective of the player's progress in the game. Engagement loops on the other hand, describes at a micro level what the players do, why they do it, and how the system response to it (Werbach & Hunter, 2012).

### *Engagement loops*

Motivation is the basis for player actions; the actions provide feedback in form of responses from the system. Feedback in a gamified experience is key; it motivates the user to take further actions since one instantly recognizes where you are in the game and if you do something good. Points and rewards are examples of game components that provide feedback to the user. The activity cycle in an engagement loop is essentially the way from motivation, to action, to feedback, and back to motivation (Werbach & Hunter, 2012).

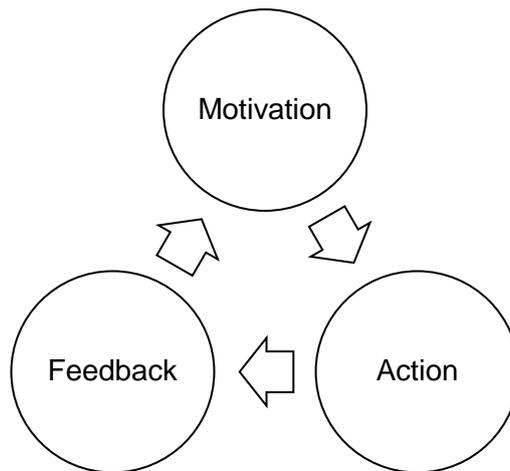
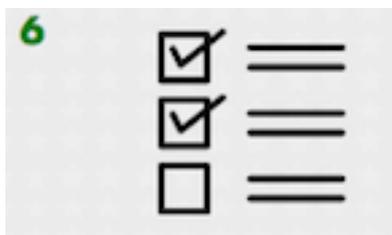


Figure 7 (Werbach & Hunter, 2012)

### *Progression stairs*

What the engagement loop do not explain is how the player advance in the game, the gamified experience cannot be the same the tenth time, as it is the first time, then the player will be bored. Progression stairs then reflects the increasing level of challenge for the player in a gamified experience. However, the increasing level of challenge should not be linear. The first stair or level for example should be simple and easy to understand in order to draw players, but as the player progress the challenges and increased difficulties of level should increase at a variable rate (Werbach & Hunter, 2012). Progression stairs is a practical examples of Csikszentmihalyi (1991) concept of flow in which the progress stairs, when doing it right, keep the player in a zone of flow perfectly balanced between the level of skill and challenge (figure 4).

### **Before releasing – Test if it is fun**



The gamified experience needs to be perceived as fun by the players. Without the “fun”, they will stop play and never comeback. Test the “fun” factor before releasing the gamified experience.

In the process of developing the gamified there are a lot of things to consider and it easy to forget the fun aspect of the game (Sweetser & Wyeth, 2005). The fun aspect should always be there, if the users perceives the experience as fun, they most likely will return. A study made by (Lazzaro, 2004) in (Werbach & Hunter, 2012) unfolds four kinds of fun. *Hard fun* is the enjoyment players feel when overcoming obstacles in the way they play, problem solving is of greatest interest, a difficult

challenge or puzzle for example. *Easy fun* explains the player's enjoyment of just playing the game, by its intrigue or curiosity for example, without a focus on winning or losing. *Altered states* describe the player's fun in how the game makes them feel inside via new experiences or personas in the game. Finally, *the people factor*, recounts the social fun of playing and interacting among friends and others even if it is competitive play.

## Control and Adjust



The gamified experience has the ability to be controlled and adjusted after it is launched. The modern technology that a gamified experience is built upon allows for a collection of valuable data to the game designers.

Keep an eye on the gamified experience after it is released. The gamified experience is built around modern technology and therefore you can analyze the players actions and movements. Check for potential cheating by the players, and adjust the level of difficulty for the players so they do not get stuck on a certain level for example. These are just examples of things you can control and adjust after the gamified experience is released. The data also gives the gamification initiators great feedback on whether the objectives set from the start are fulfilled.

### 3.7 The Gamification framework

# The Gamification Framework

## How to create a gamified experience

**1**



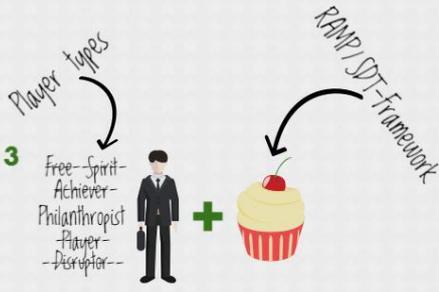
**Understand gamification and define business objectives**  
 Define business objectives, what is it that you want to achieve? Gamification can alter and direct behavior, and drive engagement. Do you understand what gamification is? And how it relates to other sorts of games and play?

**2**



**Identify your target group**  
 The players are the most important aspect to consider. Understanding them is key. What triggers them? What motivates them? And what makes them engaged?

**3**



**Match player with motivation**  
 Match player types and match them with the right motivational drivers and triggers from the RAMP framework.

**4**



*Toolbox for design*

**Build the gamified experience**  
 Time to build the gamified experience. Make sure you stick to the business objectives set from the start and carefully consider the previous steps. Especially, how can I build the gamified experience in best possible to make sure that it suits the players and their motivational drive.  
 MDA + DMC

**5**



**Consider Journey**  
 What about the journey the player takes in a gamified experience. Consider engagement loops and progression stairs that ideally lead players to a state of flow.

**6**



**Before releasing - Test if it is fun**  
 The gamified experience needs to be perceived as fun by the players. Without the "fun", they will stop play and never comeback. Test the "fun" factor before releasing the gamified experience.

**7**



**Control and Adjust**  
 Keep an eye on the gamified experience after it is released. The gamified experience is built around modern technology therefore you can analyze the players actions and movements. Check for potential cheating by the players, and adjust the level of difficulty are examples of things you can control and adjust after the gamified experience is released.

## 4 Empirical Findings

*In this section the empirical findings will be presented. The first part presents each individual interviewee and the second part presents a summary of the findings that the interviews led to. The interviews were held via Skype and had a duration between 20-45 minutes depending on how much of the company's information the interviewee was able to share. The interviews were recorded and then transcribed. The complete interview guide and instructions for the interview can be found in the appendix.*

### 4.1 Interviewee biography

**Name:** Peter Symons

**Country:** Belgium

**Experience gamification:** 3 years

**Currently working at:** Ojoo (Founder)

**Additional information:** Entrepreneur and founder of the international gamification company Ojoo. One of their major clients is the European parliament.

**Name:** David Smith

**Country:** Norway

**Experience gamification:** 1,5 years

**Currently working at:** Salescreen (After market, product development)

**Additional information:** Sales and marketing professional, previously been working with Team Rubicon, Adventures in Mission and the Wounded Warrior Project, several military decorations and honorably mentioned by George W. Bush. He is currently a business expert on Gamification in one of the Nordic countries most successful gamification companies.

**Name:** Jussi Mori

**Country:** Finland

**Experience gamification:** 4 years

**Currently working at:** Digistars, Sharpoint Saturdays and Peach Industries

**Additional information:** Has been a partner and entrepreneur at peach industries for the last 8 years. He possesses more than 4 years of expertise with in gamification and is working actively with Microsoft SharePoint to improve their user adoption rate. He has been announced as Microsoft Most Valuable Professional (MVP) for SharePoint in Switzerland.

**Name:** Stefan Thorberg

**Country:** Sweden

**Experience gamification:** 17 years

**Currently working at:** Inspiration company (CEO)

**Additional information:** Has more than 16 years of experience within B2B sales, motivation and loyalty programs. He is today CEO of Sweden's most influential gamification company and is one of the biggest names in gamification in Sweden.

**Name:** Dennis Crowley

**Country:** United States of America

**Experience gamification:** 7

**Currently working at:** Foursquare (Founder)

**Additional information:** Founder, former CEO and Chairman of one of the largest applications in the world. After quitting his job at Google, he created an application that is used by more than 60 million users daily. Foursquare was one of the pioneering gamification companies in history.

**Name:** Mario Herger

**Country:** United States of America

**Experience gamification:** 6

**Currently working at:** Enterprise Garage Consultancy (Founder)

**Additional information:** One of the biggest consultants, authors and speakers in the world in terms of gamification. He has written 7 books on gamification, held over 100 workshops on gamification around the world and is one of the big names in the academic field of gamification.

**Name:** Pete Jenkins

**Country:** United Kingdom

**Experience gamification:** 3 years

**Currently working at:** Consultant & Gamification +

**Additional information:** In February 2016 he was ranked as the number one gamification guru according to RISE. He has worked with a large variety of multinational companies. His publications were published by the Institute of Marketing and sales and can be cited in Financial Times amongst others.

**Name:** Vesa Laine

**Country:** Finland

**Experience gamification:** 4 years

**Currently working at:** Gamify Finland (CEO)

**Additional information:** Director and founder of Gamify Finland. He has several years of experience related to innovation, capability and management in change processes. Gamify Finland is one of the most well-known and successful gamification companies in the country.

**Name:** Melinda Jacobs

**Country:** Netherlands

**Experience gamification:** 5 years

**Currently working at:** Subatomic (CEO)

**Additional information:** Experienced and recognized entrepreneur and behavior change designer. She has published several papers on gamification and is currently running a large gamification company called Subatomic

**Name:** Christian Lidström

**Country:** Sweden

**Experience gamification:** 4 years

**Currently working at:** Snipe-eSport (Head of business development), Trendify (CEO)

**Additional information:** Former counter strike professional, one of the largest names in e-sport during his active time, entrepreneur and a gamification professional. He is currently working with several projects involving gamification and consumer behavior.

## 4.2 Personal and Company Questions

*The first section of the interviews was created in order to get the interviewees comfortable talking whilst being recorded and also to get an understanding on their relation to gamification and how they work with it.*

**First the interviewees were asked about their previous experience with gamification and how long they had been working with it?**

Their experience with gamification ranged from 1,5 to 7 years. One company had been working with various forms of gamification since 1999 (Thorberg). There was also a variation on how they came across gamification; some were presented with it when they were hired by companies (Smith), some started in the academic world (Jacobs), many of them had sought ways on how to improve user

experiences and user adoption and found gamification along the way (Herger; Mori; Thorberg; Jenkins; Laine) and finally, one person in particular Dennis Crowley, invented the application foursquare that today is one of the most well-known cases of gamification after being inspired by the achievement systems in videogames (Crowley). But they had all turned to gamification for the same reason - to motivate and engage users in a new and unorthodox way.

The way in which the interviewees used gamification in their work also differed, for example; Jussi Mori used gamification to boost user adoption in on boarding with Microsoft SharePoint. Stefan Thorberg worked with user and customer dialogues as well as in royalty management where he worked with loyalty programs and B2B hubs with major international companies. Dennis Crowley of Foursquare used gamification elements to motivate more than 60 million users on daily basis. However, the bottom line was that almost everyone had his or her unique take on gamification no matter if it was used in marketing, management or consumer behavior.

**A second question was asked regarding their personal/company use of gamification tools or frameworks and whether they had developed any frameworks of their own.**

Some of the interviewees did not use any frameworks or tools, Melinda Jacobs worked on a more case-to-case basis, whilst others simply did not need a framework in their daily operations (Symons). Others worked with their personally developed frameworks (Laine; Smith). David Smith of SaleScreen used an internally developed four-step-framework; understand the client, organize the task into smaller achievable goals, create meaningful rewards to the players and make it fun. Stefan Thorberg described a step-by-step model, which the company uses in their work: why are we doing this? Is the entire or are only parts of company going to be the involved? How do we communicate it? How do we make it fun? How can our customer use the points that they collect? He continued to describe why it was important to offer flexible frameworks to your clients and gave an example of flexible game element, in this case a reward:

*“Back in the days when you had sales competitions, the sales manager would sit down and figure out rewards which the employees would get. He figured out that you could win an iPad, a grill and a bicycle. Then you had 100 employees participating, eventually you had 3 winners and 97 losers. But as it turned out one of the winners already had all three prizes... basically, it was just wrong” (Thorberg)*

In the example above Thorberg used rewards as a tool were each player collects points and can use them in whatever manner they want with everything from golf clubs to experiences or charity. Pete Jenkins partly used a framework by Kevin

Werbach in order to keep himself on track in his project, but he had also developed his own framework called the 6C for gamification in marketing. Some interviewees partly used Yu-kai Chou's Octalysis framework (Mori; Herger). However, Mario Herger stated that the way in which we view frameworks today is quite limited since they are difficult to use. Instead he sought more use into looking at user interface (UI) patterns by already established businesses, in his own words:

*"Instead of reinventing the wheel they can just take a pattern from a community that they are familiar with, apply the pattern and adapt it to their own needs." (Herger).*

A conclusion could be made that the interviewees saw frameworks differently, some preferred working with the already existing non-academic frameworks, some developed their own and a few simply did not see the need for frameworks.

### **Thirdly the interviewees were asked on what the first steps they took when faced with a new gamification project**

Defining the business objective or defining the goals was the first step for most parties. Generally this step was followed by with who the players were and what motivated them (Symons; Laine; Smith; Mori; Herger). But as Jussi Mori pointed out, gamification is too advanced to be seen as a silver bullet, it was rather a highly customized process, which had to be adjusted with each individual case and client. David Smith and Mario Herger also added another important step into the initial processes; Herger called it the "Pre-requisite", an initial educational session with the clients. Smith citation below explains Herger's "pre-requisite" step in clear way:

*"If they just want gamification because it looks fun then we are like okay, "That looks great", yes it is fun BUT do you know what you want to achieve? Do you know why you are using gamification, are you using it just because you heard about it somewhere?" Smith*

Most clients have some knowledge of what gamification is but it might not be correct (Smith). They might think something is gamification because it looks like a game, but it does not have to be that way. Amazon and LinkedIn are highly gamified systems, but they don't look like games at all. So teaching the client about gamification was a very important step in order to perform better end results (Smith; Herger; Mori).

Herger continued by explaining that a gamified system was not a simple linear process but rather an ongoing dialog and cooperation with each client:

*“An example, you go to a doctor, and you say: I have a rash, the doctor then replies: ‘I have a cream for the rash, just take it’. That is the wrong approach; the doctor has to ask you why do you have a rash? ‘Because I am allergic to something’. Why are you exposed to that? ‘Because it is in my house’. Why is it in your house? ‘Because it is wet’. Why is it wet? ‘Because the roof is leaking’. Then the solution is not the cream but fixing the roof. (Herger)*

You have to ask your clients “why” they want to gamify something in order to fully understand what you want to adjust, correct, or fix with the help of gamification (Herger). The problem that you are trying to help your client with might be technical rather than behavioral, and if the problem were technical you would achieve little with gamification. If you for example want to increase the number of people filling out a quality control survey after they have purchased your service but the website is lagging or crashing, gamification will not increase the number of people that will participate in the survey. Rather, you should fix the technical aspects of the website. That is why it is important to fully understand what your client truly needs (Herger).

In general the interviewees were unambiguous in terms of the first steps. They all mentioned the same type of progress that was initiated with a purpose, a goal and hypothesis followed by an identification phase of the players and a deeper understanding of what motivates the player. Additionally, both Smith and Herger stressed the importance of understanding what gamification truly is.

#### 4.3 Questions on Framework

*The second part of the interview consisted of questions regarding the developed framework presented in section 3.6. At this point the interviewees were presented with the framework and were allowed to discuss it freely. By having open questions with the follow up question “why” we allowed for the conversation to flow freely and also to let the interviewees speak freely and openly critique the framework step by step.*

**The first question was asked on their spontaneous reaction after being presented with the framework.**

Some of the interviewees saw direct similarities with the work that they currently did and their initial thoughts were positive (Laine; Mori; Symons). Dennis Crowley called it “the typical business school approach of gamification” but did indeed recognize steps and highlighted that he thought it was a valid framework. Some pointed out that step 4 and 5 were the wrong way around and should be switched in order to better resemble reality (Jenkins; Lidström; Crowley). Some also pointed out that step 1-3 closely resembled the structure in how they operate (Jacobs;

Jenkins; Lidström) and Melinda Jacobs went on comparing it with their own approaches:

*"I work like this: what do you want to achieve, why do you want to achieve it, and from who are you trying to ask it from" (Jacobs)*

Herger pointed out that there should be a step between step 1 and 2 which he called the observation phase where you validate if step 1 is correct, as previously mentioned in the last question of the first section (the pre-requisite). He also pointed out that the framework should not be limited to the defined player types, but they should rather look at players from a larger demographical perspective.

The framework was critiqued but almost all interviewees also found steps or parts of the framework that they truly thought represented their reality, especially step 1-3.

**The second question regarded whether or not the interviewees could recognize any of the steps in their business as of today**

Almost all interviewees recognized step 1-3 and many stated that it was a close resemblance to how they work. Peter Symons stated:

*"Indeed, the first three steps are more on a theoretical basis, just "what and how and who", and then 4-5 is actually building it, and then 6-7 is quality control" (Symons)*

The answer to the second framework question was often tied in into the previous answers but by combining the answers that the interviewees gave, there was similarity between the framework and reality. Additionally not all parties worked with step 4 since some of them had pre-constructed platforms on which they worked from and there was therefore no need for "constructing the software" (Symon; Smith; Crowley). The later parts of the framework were mainly mentioned briefly since building and quality control of the gamified experience seemed like a natural occurrence in these circumstances. The interviewees had difficulty discussing the actual building of the game (step 4) since none worked with software programming where the gamified experience is actually built. The interviewees saw themselves as project managers and designers where they create the ideas and blueprints that consider all the important aspects of the gamified experience. The ideas and blueprints is then handed over to a software programmer who build the experience. Overall there was a good resemblance to reality with a couple of suggested changes, which will be described below.

### **In the third question the interviewees were asked to discuss the strongest features of the framework**

As stated by the interviewees in the previous questions several interviewees saw the first three steps as some of the clearest and most important steps of the gamification process. Some even stated that the framework was an almost perfect resemblance of their actual work and pointed out that it more or less covered the entire processes of developing a gamified experience (Mori; Laine; Crowley; Smith; Jenkins) Others pointed out that it was good since it reminded them of their own working experiences or privately developed frameworks (Symons; Thorberg). Another positive feature was according to Jenkins, the processes to go through, the step by step approached allowed for anyone using the framework to easily navigate through the framework. Christian Lidström also stressed the simplicity as a strong point.

All and all the interviewees saw the framework as valid and found similarities in their own work. However, the interviewees also found room for improvement that was discussed the in fourth and final question below.

### **In the fourth and final question, the interviewees were asked to discuss steps in the framework that they would change, remove or add.**

In the interviews this question was strongly emphasized by the interviewers in order to more easily spot the difference between the framework and reality. Eventually several points of improvement were discussed:

Simplicity – Even though it was consider to be a strong feature of the gamified framework some of the interviewees also gave a lot of room for interpretation, this meant that the framework could also be misinterpreted and too simplified, gamification is after all not a simple process (Lidström; Herger; Mori).

A red-thread, story or narrative had to be actively present throughout the framework in order for it to make sense (Lidström; Jacobs)

It is important to understand why the client is interested in gamification in the first place; some of them do not understand what gamification truly is:

*“Many people think that you can just take some PBLs and you will have a gamified system with 300% increase in user engagement” (Mori).*

Educating the customer/clients is there for key in getting a successful end results (Symons, Laine, Mori, Smith; Herger)

Step 4 is crucial for a successful gamified experience but you need software programmers to develop the experience. This needs to be considered early in the processes (Jenkins).

Consider infinite and finite games. Some games or gamified experience are finite, which means just like in a football game they have a start and a finish. Some games are infinite which means they are set over a much longer perspective such as loyalty programs. Therefore you have to treat a gamified experience differently whether it is finite or infinite (Herger).

There are more aspects to the players than presented in the different player types by Marczewski. According to Herger there is an even better framework, which describes player-types which goes more into demographical factors such as culture, social roles and professional perspectives. Herger suggests his own player type model – the multidimensionality of players.

Several interviewees also pointed out that data-collection was an essential part of their end-results with gamification and thought that such a step should be included to assure that the goals were being met. The modern technology on which gamification is built upon can collect any type of information about the players that can help both developers and clients to analyze results and behavioral patterns (Symons, Smith, Thorberg).

In addition to this, some of the interviewees stated that more detailed steps in the framework would enhance its usability. However the simplified version, as presented during the presentation, was a great way of conveying the message to a client or someone who did not fully understand gamification (Lidström).

## 5 Analysis

*In the analysis section we approach the empirical and theoretical data in accordance with content analysis. Firstly a table summarizing the findings is presented with each category representing a step in the framework, with exception of the first category. Each category is analyzed from a theoretical and empirical point of view.*

	<b>Theory</b>	<b>Empirical observations</b>
<b>Need for a Gamified Framework</b>	There is a need.	There is a need.
<b>Understand gamification and define business objectives</b>	Be clear about your business objectives and assure that you have good knowledge of what gamification is.	This step is important and should assure that the gamification process have a clear and direct purpose. Additionally you should make sure that clients understand the functionality and limitations of gamification.
<b>Identify your players</b>	Bartles player types, Marcezawskis six player types.	Bartles player types/ Personally developed frameworks/ Multidimensionality of players.
<b>Match the players with the right motivation</b>	RAMP and SDT.	Octlysis/ Personally developed / Experience.
<b>Build the gamified experience</b>	Game design frameworks: MDE and DMC.	We were not able to get large enough of a sample with interviewees that worked with actual programing and could therefore not validate this point.
<b>Consider the journey</b>	Progress stairs, activity cycles and flow.	Flow/Infinite or finite/Switch place with Build the gamified experience.
<b>Before releasing - Test if it is fun</b>	Consider the fun aspect and the functionality.	Important but not always possible, limited due to budgets and time.
<b>Control and Adjust</b>	Quality control, results display.	Quality control, results display.

Table 2, Content Analysis

### **Need for a Gamified Framework**

In the early stages of the literature review it became evident that there were no complete academic gamified framework, which described the processes from start to end. Gamification had since the beginning been rather unsystematic and unorganized with no common ground for definition nor frameworks. Therefore in light of the request of a framework we sought it to be relevant to investigate whether or not gamification experts had the same view on the need of a gamified framework as the academic world. Did business experts use gamification frameworks at all when creating a gamified experience? Since no similar study had previously been conducted we felt the need to answer that question in order confirm that this study was relevant to both the academic and the business world.

By asking about the usage of models and frameworks with follow up questions regarding why or why not they were used it became evident that companies saw frameworks differently. Some sought the use of frameworks to be a necessity in their everyday work whilst a few disregarded them, they simply did not need it. What could be concluded from this was that the majority of gamification experts indeed worked with privately developed or non-academic frameworks. These implied frameworks indeed were being used in the business world and from that we derive that the business field was in agreement with the academic requests of a gamified framework. The interviewees who did not use frameworks still had a structure in their work, which was not written down, or pin pointed. However such a structure could also be seen as a type of “framework of the mind”. Those types of frameworks can only be used if the person working with gamification has a lot of experience in the field. For someone who is new to the field a well-presented step-by-step framework will make it easier to fully understand the processes of the creation of a gamification experience.

### **Step 1: Understand gamification and define business objectives**

Theory clearly states that the first step when creating a gamified framework is to establish clear business objectives. It is important to constantly return to these objectives throughout the gamification processes in order to assure that the end results actually answers the initial objectives. It is also important for the individual creating the framework to fully understand what he or she is doing in terms of separating gamification from other types games and play. The empirical findings showed that all interviewees saw this step as very important. Without goals it was hard to achieve anything concrete with foreseeable results. Some interviewees also pointed out that it was important to take the clients understanding of gamification into processes as well. This was to a large extent overlooked by theory but the business experts claimed that the client had a high impact on the entire processes, and if they lacked an understanding of what gamification is trying to achieve the end results could be skewed. Some interviewees had experienced this first hand. Therefore they sought it important to introduce a “client teaching step” in the framework. After carefully analyzing the thoughts of the interviewees

we agreed that their arguments were valid, however there was a factor that made that step hard to generalize. Some companies, such as Foursquare, never worked with clients. Since theory never discussed this point we had overseen it and realized that it cause a major concern in further developing the framework. We therefore suggest adding the following information in the framework: Additionally it is important that everyone involved in the gamification project, even clients if such exists, are aware of the functionality and limitations of gamification to assure positive end results. After concluding this we also sought the use of the framework developed in this thesis to be of aid when teaching clients the basics of what gamification really tries to achieve.

### **Step 2: Identify your players**

According to theory gamification centers around the players, they are the key element in any game, therefore your gamification design and even your goals should be centered on them. The problem with players is that different types of motivational drives stimulate different types of players. In order to face this challenge we used Marczewskis six different player types in order to give the framework a base to stand on. Bartles player types were adapted to a gamified setting by Marczewski to make them even more precise and flexible. The interviewees recognized this step to be of great importance to the gamification process and were in agreement with theory, the interviewees stated that gamified experiences should be centered on the players. Interviewees who did not use privately developed frameworks still preferred using Bartles four player types; there was a tendency of laggard in knowledge from the business side since Marczewskis six different player types are the newer and adapted version of Bartles pleyer types we recommend the usage of Marczewski instead of Bartle. However, both Bartles and Marczewskis player types framework-received critique from Herger who claimed that his personally developed framework called the Multidimensionality of Player describes the player types better than Bartles and Marczewski player types. Therefore, we sought out to learn more about the Hergers player type framework and concluded that the information available was limited. Even though we found the Multidimensionality of players to be reasonable, we simply could not find enough facts to support it. Therefore we recommend to stick with the original framework presented to the interviewees. However, in future studies it would be highly interesting to investigate whether the Multidimensionality of players could replace the six player types by Marczewski.

### **Step 3: Match the players with the right motivation**

To match the player type with the right type of motivation is one of the most challenging tasks when working with gamification. Attempts have been made in order to establish a well working framework but the closest thing to a link between player types and player motivation is the RAMP framework. The framework was created by Marczewski, the framework is based upon the highly influential SDT framework that studied human motivation. There was a great

difference in how the interviewees approached this delicate matter. Stefan Thorberg had for example turned the problem on itself by allowing user to select the rewards of their choosing after performing the desired task. This technique did however require large investments and years of development. Many sought use in Yu-kai Chou's Octalysis framework of player and motivation matching but some interviewees also critiqued for being time consuming and therefore required large budgets from the clients. We could conclude that the majority of interviewees relied on their own experience when figuring out how to motivate the players, either by trial and error or by studying possible players. To our surprise even though as many approved and agreed with the presented framework no one used the RAMP framework in their work. The more we learned about their ways in matching players with motivation the more we realized how difficult it was to get it right. Derived from what the interviewees said and our own knowledge we realized that approaching this problem, as structured and easy as possible would indeed save both time and effort for a lot of companies. On one hand most interviewees approved of the RAMP framework but on the other hand many actually used the Octalysis. Yu-kai Chou's Octalysis was not published in the databases we searched but was however accepted by the gamification experts. With that being said we chose to stick with the RAMP framework for now but highly encourage this matter to be further investigated in future studies.

#### **Step 4: Build the gamified experience**

In this step of the framework the coding and construction took place. Here one has to consider what to include and exclude in the experience given the goals, players and type of motivation. It is of high relevance to the game designer to constantly look back at the goals whilst building in order to achieve good results. The MDE and DMC frameworks are suggested as aids since they offer the game designer great tools in building. Not many of the interviewees spoke in detail about this step since they were not the actual ones building the processes at their respective companies. Instead they had programmers who did the actual coding for them. In this aspect we failed to acknowledge the role of the programmer in the processes of gamification and this point could therefore not be validated from an empirical point of view. In future studies researchers could therefore investigate this phenomenon with programmers to see how the gamified experience is built in a more hands-on perspective.

#### **Step 5: Consider the journey**

In theory progression stairs and engagement loops are often discussed and described as the actual gameplay on a micro and macro level. On a micro level engagement loops are used to keep the players motivated and to encourage them to keep on playing. On a macro level progression stairs help the players keep track of their overall progression. These two methods when used correctly create flow. Some interviewees did not consider this step since they only worked with platforms from which clients built their own gamified experiences. Others deemed

it to be important to include whilst a few saw it as rather ambitious especially when looking at games that are finite. Herger stated that one should consider whether the game was finite or infinite since finite games did not have to consider the journey in the same way as infinite games. We analyze this critique in two steps: first of all, as the framework was created we cannot determine whether it will work in a finite, infinite or in both settings. That has to be further tested and this was something we did not consider during the development of the gamified framework. Secondly, if Herger's statement was true would the whole framework have to be altered to depending on the gamified framework being finite and infinite or would only a small part of it have to be adjusted. This is something that we also leave open to future research since the neither the theoretical or empirical findings could decide on this being true. Overall the majority still saw Consider the journey as a necessary step in the framework however most interviewees pointed out that it was misplaced with the step "Build the Gamified Experience". After revising the framework literature and revising the transcripts from the interviews we decide to agree with that specific critique and therefore advice a change were "Consider the journey" and "Build the gamified experience" switches places in the order of the framework. It is hard to create flow after you have actually built the gamified experience.

#### **Step 6: Before releasing – Test if it is fun**

Before releasing it to the public one has to make sure that the gamified experience stays to their core values in order to assure that the gamified experience is actually truly fun. The game-testing from the interviewees point of view was often associated to be positive but not always possible. Limited budgets and time often forced the interviewees to skip this step. Some however saw it as a very important part in order to see what you actually could achieve before you launched the gamified experience or if there any obvious changes that has to be made before launching it to the intended players. We however consider this step to be considered, if possible, and one should always strive to test the version before launching it. This allows for game creators to adjust glitches and bugs, which can be demotivating for the players once the game is launched.

#### **Step 7: Control and Adjust**

The final step in the framework is where you continuously can observe your gamified experience. With the help of algorithms a controller can follow, observe and adjust the gamified experience according to the players different movements. It is an important process since it can help game designers to make sure that players do not get stuck on certain stages in the gamified experience which could make them leave the game. Several interviewees pointed out that this step was very important to them in terms of quality control. It allowed for them to pass information on to clients and also to keep the quality of the game constant. Another important factor from both theory and the empirical data was that this

step allowed for algorithms to discover whether gamification actually solved the problem it was intended to do, in other words did the gamified experience achieve the goals? The positive side of this was that both interviewees and theory seemed to be aligned and clear that this step was essential to measure success. We also argue that this step was also the step where you actually learned from the entire framework since you get feedback on if what you have created works according to plan. After seeing your results from the data collected in this final step you can bring the results from that project on to the next and learn from it. It could be described as the final piece of the puzzle, without it you will never see the whole picture of your gamified experience.

## 6 Conclusion

The purpose of this thesis is to develop a gamified framework based on existing theory on gamification and then verify its practical relevance via field experts on gamification. With the existing gamification literature within business administration we developed a framework describing the process from the start to end of a gamified experience. The framework can be found under section 3.6 and 3.7. To verify the framework we used gamification field experts from different companies around the world and sought to answer the two research questions in order to verify that there was a need for a gamified framework and that the developed framework was applicable in real world practice. With the analytic comparison between theory and the empirical findings we answered the two research questions:

*R1: Is there any need for a practical framework describing the process from start to end of a gamified initiative?*

Both the academic and the majority of the interviewees saw it as a necessity in order to create gamified experience. Gamification researchers had been requesting a framework in order to more easily describe the field and most interviewees used models in their everyday work and saw them as great tools when working with gamification. We concluded that the majority of interviewees used privately developed or non-academic frameworks. Since they used frameworks and had a positive response to the framework created in this thesis we draw the conclusion that our framework once refined could potentially have a place in the business world and as a foundation for academia to further develop and research upon.

*R2: What are the similarities and differences between how gamification experts approach a gamified initiative compared to the theoretical framework developed?*

There were great similarities between how gamification experts approached a gamification initiative in comparison with the theoretical framework developed. Almost all of the steps in the gamified processes were similar to how the interviewees developed a gamified experience. However the applied theories within the different steps in the framework differed to some degree from the interviewees point of view. We conclude that the framework developed to a large extent is in agreement with real world business practice.

We have by no means created a perfect framework that describes the gamification process but it is an academic foundation on which scholars can continue to build upon and adapt when more research material on the subject area is presented. The purpose was to build and verify a gamified framework and with this thesis we have fulfilled that purpose.

## 7 Suggestions for future research

After concluding the thesis we were left with four major points of future research. They will be presented below:

- The six player types versus the multidimensionality – As discussed by Mario Herger the Multidimensionality of players could possibly replace the six player types by Marczewski. By analyzing the six player types by Marczewski one can conclude that they are at some points shallow whilst the Multidimensionality of players by Herger go more in to detail on describing the players. The Multidimensionality therefore has the potential of being superior to Marczewski six player types, but this has to be further researched.
- Finite versus Infinite games – Finite versus infinite games were also discussed by the interviewees. This phenomenon was not mentioned in the theoretical material and we therefore overlooked it when creating the gamification framework. The reason to why we find it important is that the empirical findings suggest that different durations in the gamified experience, finite or infinite, could possibly have to be treated differently. In retrospect it should clearly be investigated further and we therefore suggest it as a point of future research.
- RAMP versus Octalysis – Several interviewees agreed with us on integrating the RAMP framework in our gamification framework but we saw a pattern that the same interviewees preferred using the Octalysis. We therefore suggest that scholar's compare the two and looks at which one would be superior to use in our framework.
- Building your gamification experience - Since this research did not take programmers coding in consideration to the end product it would be interesting to investigate their take on the Build your gamification experience step.

## Appendix

### Interview Guide

# Questions on the Gamification Framework

Hello! Thanks for taking your time to help us out with our study. Below you will find a simplified version of our Gamification Marketing Framework. The idea of this Infographic is to give you an understanding of how the academic world views gamification without boring you with all the details; you will receive the full version once the thesis is published! Each point only represents a small fraction of the actual research behind it, but we are hoping it is enough for you to get an idea of how we think. However, the most important thing is for us to understand how YOU think, that is why we are so glad that you are taking your time to help us out. Scroll down to find the questions that you will be asked during the interview as well as the simplified graphical version of the framework,

Talk to you soon!

### Company and Personal Questions

What is your experience with gamification? How long have you been working with it?

As of today, does your company use any widely available frameworks/tools when creating gamified marketing campaigns, products or services? Which ones? Do you use any privately developed frameworks/tools?

What are normally the first three things you do when presented with a new gamification project?

### Questions about the framework

When presented with the framework, what is the first thing you think?

Do you recognize any of the steps from the framework in the work that you do today?

What do you think are the strongest features on the framework?

If you were to improve something on the framework, based upon your previous experience, what would that be?



Skype username:  
**Bomsw**

*Call me!*

*Scroll Down!*



# Simplyfied Verision of the Gamification Framework

## How to create a gamified experience

1



### Understand gamification and define business objectives

Define business objectives, what is it that you want to achieve? Gamification can alter and direct behavior, and drive engagement. Do you understand what gamification is? And how it relates to other sorts of games and play?

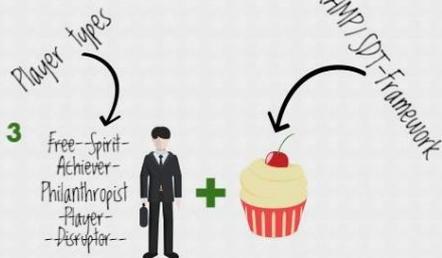
2



### Identify your target group

The players are the most important aspect to consider. Understanding them is key. What triggers them? What motivates them? And what makes them engaged?

3



### Match player with motivation

Match player types and match them with the right motivational drivers and triggers from the RAMP framework.

4



### Build the gamified experience

Time to build the gamified experience. Make sure you stick to the business objectives set from the start and carefully consider the previous steps. Especially, how can I build the gamified experience in best possible to make sure that it suits the players and their motivational drive. MDA + DMC

5



### Consider Journey

What about the journey the player takes in a gamified experience. Consider engagement loops and progression stairs that ideally lead players to a state of flow.

6



### Before releasing - Test if it is fun

The gamified experience needs to be perceived as fun by the players. Without the "fun", they will stop play and never comeback. Test the "fun" factor before releasing the gamified experience.

7



### Gamified Experience

If the game is designed properly you can predict the behaviors of consumers

8



### Control and Adjust

Keep an eye on the gamified experience after it is released. The gamified experience is built around modern technology therefore you can analyze the players actions and movements. Check for potential cheating by the players, and adjust the level of difficulty are examples of things you can control and adjust after the gamified experience is released.

9



### Do not forget!

to read our paper on The Gamification Marketing campagin, available in June 2016

by Victor Wakerius & Emil Wiklund

Toolbox for design game

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