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Platforming Gamification as a Means of Engagement in Employee Recruitment and Onboarding

By

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Advisor: Dr. David Fredrick

An Honors Thesis in partial fulfillment of the requirements for the degree Bachelor of Science in Business Administration in Management and Information Systems.

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Abstract:

Gamification, generally understood as the application of game elements and design concepts in non-game contexts, is a field of academic study and multibillion-dollar business tool whose popularity is growing as a means of employee engagement, education and training, and talent selection. While there are companies that attempt to gamify separate processes within the employee life cycle, no company exists that gamifies the stages surrounding talent selection: attraction and recruitment of applicants and onboarding of final candidates. To this end, this thesis proposes a software and consulting company, GameON Business Solutions, that will work with small and medium enterprises to expand and diversify the talent pool and prepare new employees for working at the company.

Background:

This literature review begins with a summary and analysis of the research surrounding gamification conceptually, including the game design theory in which it is rooted. The focus then shifts to its potential and extant applications in business, demonstrating the theoretical value of a company that provides recruitment and onboarding gamification services. Finally, it addresses some of the major concerns about current gamification practices in an attempt to avoid those pitfalls when creating a strategic business plan.

Defining Gamification

Any discussion of gamification, in the workplace or otherwise, must begin with a clear definition of the term and what it entails. Currently, there are two major definitions that offer perspectives in the contexts of both human-computer interaction (HCI) and service marketing. The HCI-oriented definition explains gamification as “the use of design elements characteristic for games in non-game contexts” (Deterding, Dixon, Khaled, & Nacke, 2011).¹ The framing of this definition exists to separate something that is “gamified” from the broader category of “play” through the existence of structured rules, scenarios, outcomes, and consequences. Furthermore, gamification is also distinct from “serious games” in that it only utilizes parts (i.e. elements) of games rather than whole games (see Figure 1). While Deterding *et. al.* consider gamification from a systems perspective, Huotari and Hamari’s service marketing definition focuses more on what they see as its goal – to provide for specific and valuable user experience. To them, gamification “refers to a process of enhancing a service with affordances for gameful experiences in order to support users’ overall value creation” (Huotari & Hamari, 2017). The service marketing approach is substantially broader and focuses on the diversity of responses a group of people might have to gamification.

As demonstrated above, defining gamification is an inherently contentious exercise, as both sets of authors agree that delineating the scope of what constitutes game components is a subjective decision. The Deterding study splits those elements into five distinct categories: *interface design patterns*, structures common in the human interaction with games; *design patterns and mechanics*, or the aspects of the gameplay itself; *design principles and heuristics*, or the common evaluative goals between genres of and the various mediums for games (such as a variety of playstyles and replayability); *models* of the game experience that explain how its systems interact with the player and how emotional responses are achieved; and *design methods*, or the systemic procedures commonly used when developing games, such as beta testing and

¹ Note that, though this study is dated in 2011, Deterding’s definition of gamification has been part of scholarly literature since 2008.

value-oriented design. While a “gamified experience” should not consider all of these concurrently, they need to use at least some of them to not be considered a form of simple “play.” By contrast, the social marketing definition focuses on the use of *affordances*, or potential object-actor interactions that can, but do not have to, be characteristic of games to create *gameful experiences*, or outcomes common in but not exclusive to games to drive *value creation*. The last component of this list deserves special attention, as the service marketing approach adhered to by Huotari and Hamari sees value creation not as intrinsic to the service or gameful experience, but extrinsically generated by the consumer through the use of the service. In the context of employee recruitment and onboarding, this is particularly relevant as different employees can be expected to derive value in different amounts and situations based on the nature of the service provided.

Though these definitions function well within their disciplines, they individually fall short in the context of human resources. Huotari and Hamari’s definition fails to address the need for systematic, well-defined processes in business, and the Deterding definition alone is difficult to apply to a business outcome or goal that gamification can drive. Therefore, the solution to defining gamification for use in human resource processes is to combine the core factors of both approaches into a single definition. In this manner, gamification is the use of “design elements characteristic to games” that enhance “value creation” in business processes by soliciting emotional responses from employees.

In addition to the definition itself, it helps to consider frameworks that suggest how gamification should be modeled. One of the oldest versions present is the Mechanics-Dynamics-Aesthetics approach, designed to “bridge the gap between game design and development, game criticism, and technical game research” (Hunicke, LeBlanc, & Zubek, 2004). At its core, the MDA framework is an attempt to identify specific components of the environment in which games are played and correlate them with parts of the design process. *Mechanics* refer to the design of game rules, functions, and abilities the player interacts with. *Dynamics* is the process of designing the interactions between players and mechanics and the outcomes of those interactions. Finally, *aesthetics*, the designing of “fun,” refer to the emotional responses a game elicits from its players, whether intentionally or not. The aesthetics of game design in this model deserve special treatment, as they detail the experiences (i.e. value) a player wants to gain by playing a game. Hunicke’s team identifies several of the roles a game may aesthetically take, including but not limited to an *uncharted territory* that drives discovery, *drama* that drives a narrative, a *social framework* that drives fellowship, and an *obstacle course* that provides a challenge. By developing the mechanics and dynamics of a game within the context of desired aesthetics, MDA enables an iterative development process where games can be continuously tweaked in the pursuit of design goals. Each of these goals can translate to business objectives; discovery can foster skill development, fellowship can help in team-building, and challenge can create motivation.

By contrast, Jesse Schell models games through a series of over 100 “lenses” that address questions of design, development, and marketing of games. While it is more oriented towards *full games* rather than gamification and gamified experiences, several of the lenses are nonetheless valuable in building the latter. The Lens of Emotion challenges designers to identify and close gaps in the extant emotions of the player and the desired emotions of the game designer, a process that can also be seen as the means of generating Hunicke’s aesthetics. The Lens of the Essential Experience asks how to condense the desired result into its “essence” – the key features that define it – and how the game is organized to capture said essence. These build

into the Lens of the Elemental Tetrad, a four-part model that is essentially Schell's version of the MDA framework. *Mechanics* is one of its elements, and it is largely equivalent to its MDA counterparts. However, *aesthetics* in Schell's Tetrad refers more to the sensory experience of the game than the experience it intends to elicit. Schell places additional emphasis on *technology*, or the (in)tangible vehicles for aesthetics, and the *story*, the linear or branching sequence of events that emerges through mechanics and aesthetics generates experiential outcomes. Schell's model places particular relevance on how each of its elements interacts with each other to achieve the game's goals and have differing levels of visibility to the player (Schell, 2019, pp. 18-23, 53-55).

Bond adapts and expands upon Schell's Elemental Tetrad in his Layered Tetrad, a model of game design. The baseline structure is nearly identical to Schell's (with "story" being exchanged for the broader "narrative"), but Bond subdivides the model into inscribed, dynamic, and cultural levels. The *inscribed layer* is best described as the persistent components of game design, or those that are present even without player action. Naturally, the players move the game to its *dynamic layer*, which details the interactions of the four core elements while the game is played. Finally, the greater community of players progress the game to its *cultural layer*, which describes the impact of the game on its player base and greater communities and vice versa. Unlike the other two layers, the cultural layer is bidirectional; just as a game's community drives its culture, the game is also influenced by external cultural groups. Examples of behaviors generated by the cultural layer include fan-created art and music, community mods, and media responses/reviews. A visualization of the Layered Tetrad can be seen in Figure 2 (Bond, 2014, pp. 31-37). The cultural layer is particularly valuable to the discussion of business gamification, as the prominence of the latter is in large part due to cultural differences between 20th and 21st-century generations of workers. Ultimately, The Layered Tetrad is useful for its ability to combine the strengths of both the MDA framework and the Elemental Tetrad.

A final design goal that drives how gamified processes are modeled regardless of the various designs explored above is Salen and Zimmerman's concept of *meaningful play*. To them, the "creation of meaningful play" is the resultant experience of successful game design, and they define it in two ways. Descriptively, meaningful play results from "the relationship between player action and system outcome." It is not only the value gained from the results of the game but the value involved in the unique experience that the specific set of player/system interactions (much like dynamics in the MDA model) creates. The construction of these relationships is expanded upon further in the book's section on the anatomy of choice. Tekinbas and Zimmerman build a five-step model to understanding choice, which in turn drives interactivity. First, game design must consider what has happened prior to a choice, and how outcomes of prior choices might shape this particular choice. Next, the choice must be conveyed to the player, and how they make their choice should be examined. The result of the choice must be contextualized in terms of the game's present state and future choices. Finally, that result should be delivered to the player, who is able to shape further action accordingly. This helps explain *what* builds meaningful play, but not *how*. Evaluatively, meaningful play arises when the aforementioned relationships "are both discernable and integrated into the larger context of the game." Here, *discernable* relationships mean that players can see and understand the causal relationship between player actions and system outcomes; for those relationships to be *integrated*, the interactions must create demonstrable short and long-term impacts within the game's system, similar to how dynamics are driven by mechanics in MDA. In many ways, "meaningful play" is a more player-centric version of the MDA framework, one that addresses

the need for games to create a lasting impact in a player's consciousness to be successful (Salen & Zimmerman, 2004).

Just as it is worth considering the roots of “meaningful play” that drive gamification, it is similarly important to distinguish “meaningful gamification” from any “non-meaningful” alternatives. Originally coined by Scott Nicholson, meaningful gamification is distinct from other methods in that it “focuses on play to engage participants in a ludic learning space.” Essentially, meaningful gamification does not only implement game elements in non-game processes successfully, but the dynamic and interactive experience between a set of players and a system that games create as well. The alternative approach to gamification in this paper that Nicholson spurns, known as Badges, Levels and Leaderboards, Achievements, and Points (BLAP) creates an external rewards system for work that falls short of establishing substantial, long-term motivation in employees for the same reasons as traditional incentivization (Nicholson, 2012). Therefore, the goal of meaningful gamification is not to add an additional avenue of employee rewards but to introduce fun and play into the workplace to drive intrinsic motivation, internal loci of control, and the value employees find in the work processes themselves. While gamified processes in business need to possess some structure as a means of driving objectives, process designers should take care not to create a system so complex so that the entertainment value and emotional responses that games are intended to elicit are not lost.

Gamification in the Workplace

The practice of gamification in the workplace is far from new. The process starts with adapting the definitions and framework explained above for use in business processes. One such study expands the “aesthetics” category of the MDA framework into more general “emotions,” where the latter is a description of the results of “how players follow the mechanics and then generate dynamics” (Robson, Plangger, Kietzmann, McCarthy, & Pitt, 2015). The study uses popular show *American Idol* as an archetype of successful gamification in the workplace: it serves as a “gamified talent search” that allows stakeholders in the music industry (i.e. consumers) to play an active role in selecting new artists to listen to. By involving the entire ecosystem of the music industry – experienced judges and coaches, stage managers, and the consumers of music themselves – *American Idol* is able to create emotional reactions and connections difficult to otherwise produce or emulate. Ultimately, when designing a game in the workplace, there are several important elements to consider, such as the goals of the game (which is in some ways a “Lens of Better Business” like Schell's design lenses), who should participate and how, how the game should be adapted over time, and how it should end. The last subject of that list is particularly important to employee recruitment and onboarding, which itself is a definitively time-bound process.

A similar study addresses how the MDA framework can be construed as a series of narratives between the designer and the end-user. The mechanics created by the game designer constitute the *embedded narrative*, which represents the goals of the designer in the creation of a game. The dynamics between the end-user and the system constitute the *emergent narrative*, the story and behavior the user executes on when interacting with the gamified process. Finally, the aesthetics experienced by the user constitute the *interpreted narrative*, or the meaning they glean, hedonic and utilitarian, from the gamified process (Ruhi, 2015). Ruhi's analysis presents a way in which MDA may have a “story” context similar to Schell's Elemental Tetrad. However, as Schell implicitly states by keeping the narrative separate in her Tetrad, MDA cannot fully explain a game's narrative, as things like dialogue and art direction exist independently of the

former. To think of gameful experiences as a continuous narrative with different groups of stakeholders is a useful perspective in business, as the “going concern” of business is its own narrative, albeit a financial one involving internal stakeholders (i.e. employees) and external ones (i.e. stockholders). It also helps to connect the individual elements of game design into a more cohesive, interactive experience as opposed to the more isolated BLAP method.

While MDA is a useful starting point for the design of business gamification, it is also necessary to utilize a development process model specifically aimed at business. Werbach and Hunter, the pioneers of business gamification, propose a six-step process for implementing gamification in the business world that frames gamification in a manner similar to strategic planning. First, a firm must clearly define and rank order its *business objectives* for gamification: what they hope to accomplish and why it has business relevancy. Second in the process is to *delineate target behaviors*, or the measurable activities that contribute towards the overarching business objectives. Third, the firm needs to *describe its players*; by knowing who is participating as well as what motivates them and why, activities can be tailored to their demographical needs and the desired objectives to increase overall engagement and effectiveness. Fourth, plan the *activity cycles*, or the individual tasks that make up either a repetitive or linear part of the gamified experience. Fifth (and arguably most important) is to consider the aspect of *fun*; essentially, the actionable elements of play and design processes that are used to create an experience where people will want to participate. Finally, a business must consider the *tools* it will use in implementation, which refers to game mechanics, methods of delivery, and developmental procedure (Werbach & Hunter, 2020). As can be seen above, the first four steps are more conceptual in nature, addressing business needs and applications, and it is only after that has been handled that a firm can move on to game elements, design practices, and emotional goals as characterized by Deterding *et. al* and Huotari and Hamari. In the context of planning a platform gamification service, the ideas of Werbach and Hunter help bridge the gap between gamification as an academic concept and gamification as a viable competitive advantage.

Other models drill down into how gamification can work within specific business functions rather than using a general model. In the context of enhancing performance and performance management, gamification drives effectiveness by providing a continuous stream of performance information. In the theory, employees are more easily able to see whether they are “doing the right things” and compare their performance to others through game outcomes. They are thus able to increase the agility with which they correct their behavior relative to traditional performance evaluations. Similarly, gamification can be used to increase motivation by creating enjoyment in individual tasks. In this system, task enjoyment is a function of both the kind of gamified process and the time required to carry it out. Finally, motivation itself is also a function of both the competitiveness and existing performance quality of employees (see Figure 3). The study proposes that, since employees will respond differently to gamification, it will add more value in certain situations, with high-performing, competitive employees with a desire for self-management being the best targets (Cardador, Northcraft, & Whicker, 2017).

There are a number of examples of successful gamification of HR processes in academic studies. Big Four accounting firm Deloitte uses a feedback system that implements common game elements to increase the speed and efficiency of training programs. A plurality of employees finished training faster and returned on a daily business, demonstrating that gamification can drive engagement. While this may at first appear to be BLAP gamification, Deloitte specifies that the gamified work must be developed in alignment with “objectives,

processes, solutions, and people,” which appeals to the standards of meaningful gamification set by Nicholson and others (Wanick & Bui, 2019). Others have explored the value of gamification in developing employee competencies in enterprise resource planning (ERP) systems. In a study of college students studying introductory material about SAP’s ERP modules, Alcivar and Abad were able to conclude that gamifying the content produced better learning results and satisfaction in completing the exercises (Alcivar & Abad, 2016). In a different experiment, researchers developed and gamified a situational judgment test (SJT) as a means of enhancing the employee selection process. The SJT gauged employees’ ability to respond to specific work situations on the soft skill dimensions of resilience, adaptability, flexibility, and effective decision-making. Despite the study being unable to conclusively demonstrate that gamifying the SJT led to more effective results than using the SJT on its own, they were able to prove that existing employee selection methods could function concurrently with gamified elements (Georgiou, Gouras, & Nikolaou, 2019). Furthermore, the validity of gamified assessments is corroborated by its use in employee screening on HireVue, one of the world’s largest talent selection platforms (HireVue, Inc., n.d.). Finally, a study of augmented-reality games concluded that games built on cooperation (as opposed to individual achievement) assist in building group dynamics such as norms, positive emotions, and social identity, all of which contribute towards “we-intentions” (i.e. collective intentions). The value of collective intentions in eliciting emotional responses such as fellowship is evident in collaborative augmented reality games such as Pokémon Go. The authors suggest that this could have applications in firms that rely on crowdsourced work (Morschheuser, Riar, Hamari, & Maedche, 2017).²

Despite the glut of research done on gamification conceptually, in business, and in HRM, academic study on its applications in recruitment and onboarding is a relatively nascent field. Porter and Tanenbaum suggest that gamification in recruitment was developed partly in parallel to gamification as it is used in higher education, though the two applications are distinct in four key ways. Relative to “classroom gamification,” gamification in recruitment has higher stakes (i.e. it directly impacts potential job offers). Furthermore, there is a greater impetus for quantitative analysis of the gameful experience driven by business need and the game has the additional purposes of marketing a company to potential applicants (instead of being a supplement to learning). Finally, there is less use for a company to debrief its applicants on the purpose of the gamification exercise than there is for a professor to debrief their students (Porter & Tanenbaum, 2015).

By contrast, Chow and Chapman analyze gamification in recruitment from a psychological lens. They assert that the value of gamified recruitment processes is in their ability to positively influence both the cognitive (beliefs about what you believe to be true) and affective (feelings about something) components of attitudes held towards companies. They do so by bringing directly persuasive recruiting messages from a company to a “central route” of information processing or by inserting subliminal messaging that appeals to the less focused “peripheral route” in the mind of the applicant. The central route is a useful tool is useful for games that directly and explicitly try to persuade, while the peripheral route is useful for increasing the effectiveness of messages hidden within the narratives of games. Furthermore, behavioral psychology suggests that mere exposure to the company can positively affect attitudes, something the appeal of gamified processes to the younger generations will enhance. All of this is especially true for companies that a given potential applicant has less experience with, as attitudes that have already been formed are difficult to adjust (Chow & Chapman, 2013).

² Examples of crowdsourced companies include Uber, DoorDash, and TaskRabbit.

This suggests that, for the purposes of recruitment, gamification may be especially valuable in small and medium enterprises (SMEs). Another study used data from a gamified recruitment process at Ernst and Young to determine the value of gamified processes under the Self-Determination Theory (SDT) and the Technology Acceptance Model (TAM). The SDT is a method of categorizing behavior in terms of intrinsic and extrinsic motivations which, in turn, are driven by the satisfaction of psychological needs. By contrast, the TAM is an HCI theory arguing that positive attitudes towards a technology are affected by perceptions of usefulness and ease of use. Figure 4 shows how the SDT and TAM combine in a gameful experience to achieve recruitment objectives. The researchers determined that a gamified process successfully enhances organizational outcomes in recruitment and that it is especially useful in encouraging autonomous (i.e. intrinsic) motivation to participate in recruitment activities (Buil, Catalán, & Martínez, 2020). EY is not the only Big Four firm that has made early forays into recruitment gamification; PricewaterhouseCoopers created a game called “Multipoly” that substantially increased the number of Generation Z applicants and the time they spent on PwC’s recruitment site by providing an interactive simulation of company work (Nair & Sadasivan, 2019). This suggests that gamification is especially effective when directed towards younger generations.

Criticism of and Cautions for Gamification

Not all literature in the field lauds gamification as an effective addition to a business. Perhaps the most notable critic is Ian Bogost, a professor and video game designer known for coining the term “exploitationware” with respect to the business applications of gamification. In one of his earliest articles on the subject, he takes issue with gamification because he believes that “games as systems” are fundamentally impossible to replicate in business because the former would encourage multi-layered, deep analysis in an environment that prefers simple, monetizable, and easily replicable solutions. Furthermore, gamification replaces the use of supposed “real incentives,” in which the business uses its resources to generate bidirectional relationships of trust, with “fake incentives” that focus only on cost reduction (Bogost, 2011). Bogost goes so far as to claim “gamification is bullshit,” a position he expands upon as being based on the notion that business consultant proponents of gamification use it to “justify and better their own existence” rather than bettering the business processes themselves (Bogost, 2014). His disdain for gamification in business is also based on the importance he places on “procedural rhetoric,” a concept he created to explain video games’ unique ability to persuade and affect cultural change through the use of a rules-based, interactive narrative (Bogost, 2010). Bogost sees gamification as an attempt to leverage the rhetorical benefits of games without actually creating the procedural narrative that kind of rhetoric requires to be effective.³ In partial response to Bogost’s arguments, Gabe Zichermann published a Code of Gamification Ethics (see Figure 5) that attempts to orient gamification efforts away from the “exploitationware” that Bogost opposes (Zichermann, 2012).

By contrast, PJ Rey opposes gamification from the perspective of a “sociological analysis of capitalism.” Here, gamification is an activity that turns commodities into “hypercommodities,” things driven more by the value assigned to them by society than any intrinsic purpose it may (or may not) have had. To Rey, this turns the act of gamification into an “insidious” design choice by businesses that seek to drive engagement, revenue, and other business objectives while minimizing the need to functionally improve their goods or services.

³ While Bogost condemns gamification in the sources mentioned in its entirety, the practices he actually takes issue with are more reminiscent of BLAP gamification than the “meaningful gamification” supported by Nicholson and others.

For company internals, this results in the phenomenon of *playbor*⁴, where what Rey sees as a much-needed distinction between work and play is blurred so as to encourage more positive attitudes towards accomplishing more work (Rey, 2014). In the context of human resources management, this indicates that gameful experiences should be designed in terms of how they can drive *bottom-up* value activities instead of *top-down* ones.

Though neither Bogost nor Rey explicitly tackles this, the former's concept of "procedural rhetoric" and Rey's idea of gamification as a vehicle for "hypercommodities" both underscore much more serious ethical implications of leveraging the power of games in business. True games are among the most powerful and influential forms of media, and they possess those capabilities precisely because they excel at crafting interactive, emotional narratives that affect long-lasting attitudes in their participants. Assuming that a business opts for "real" gamification, that business is exposing themselves and their activities to analysis, critique, and any societal punishment that may result from ethically questionable activity. Part of the reason BLAP gamification is inherently attractive to especially large enterprises is that it is both easier to implement and does not subject a business to as thorough a scrutiny of its behavior. The ability of games to reveal, observe, and consider a company's moral norms furthers the case for a "meaningful gamification" service to focus on SMEs, who are less likely to have (albeit not immune from) ethical infractions that they would not want to be revealed by the process.

Other researchers are less all-encompassing than Bogost and Rey, instead taking aim at more specific problems of gamification as it is applied in differing contexts. Trang and Weiger, for example, explore the privacy risks⁵ caused by gamified processes' ability to generate "cognitive absorption." In this context, cognitive absorption is "a state of deep involvement with software" characterized by *temporal dissociation*, *focused immersion*, *heightened enjoyment*, and greater senses of *control* and *curiosity* (Agarwal & Karahanna, 2000). Cognitive absorption is itself a technological application of the much older psychological concept of "flow," a mental state of extreme focus resultant from the enjoyment of an activity. Game developers frequently seek to create such a "flow activity" in the pursuit of meaningful play (Csikszentmihalyi, 1990). In an experiment involving gamified phone applications for health, education, and physical activity, Trang and Weiger determined that gamifying a process made it more likely for users to share private details with firms, though disclosure is mediated by user perception of privacy risks, benefits, and concerns (Trang & Weiger, 2021). This is especially poignant in the gamification of human resources systems, many of which, by design, must securely retain and process personally identifiable information. A study of gamification used on front-line employees (FLEs) in retail and telemarketing demonstrates that gamification negatively affects satisfaction and engagement, the latter of which is a key performance indicator. However, an FLE's willingness to participate in gamified work can at least partially mitigate against these effects (Hammedi, Leclercq, Poncin, & Alkire, 2021). Richard Landers cautions against the growing presence of what he refers to as "rhetorical gamification" in the workplace. Definitionally, rhetorical gamification is "interventions and products designed to look like games or gamified products but without any of the formal design processes known to lead to success;" functionally, it is the practice of adding easily recognizable game elements to processes purely to market to and attract the desired audience rather than redesigning the entire process in a gamified

⁴ Originally used to describe the phenomenon of video game developer control over unpaid, unsolicited community modifications (Kücklich, 2005).

⁵ In this context, includes such issues as "price discrimination, unsolicited advertising, or sharing of personal information with third parties (Trang & Weiger, 2021)."

context. Ironically, rhetorical gamification is therefore incapable of creating the procedural rhetoric that Bogost values. It is also worth noting that Landers's rhetorical gamification is highly similar to the "BLAP gamification" that Nicholson cautions against, and that Landers specifically criticizes Bogost's arguments against gamification for not separating its "rhetorical" and "legitimate" forms (Landers, 2019). Another struggle for businesses is the necessity of diverse skill sets to successfully implement gameful experiences. Werbach and Hunter suggest that firms need support from strategic planners, analytics experts, people who understand the target audience, game designers, and "technologists" able to develop games (Werbach & Hunter, 2020). While it is reasonable to suggest that most companies will have the resources to fulfill the first three requirements of that list, the last two are specialized roles that may be difficult to grow the necessary human capital for, especially in smaller enterprises.

Finally, though not strictly within the scope of business, research done on gamification in the education space can provide valuable insights on what helps and hinders motivation and engagement, the two cross-discipline objectives of most gamified systems (see Figure 6) (Wanick & Bui, 2019). A survey of higher-education instructors identified several barriers to gamification that may persist across industries: a *lack of resources*, both temporal and economic; *apathetic responses from participants*, *subject incompatibility*, and *conflicts with the classroom* (i.e. workplace) *environment* (Sanchez-Mena & Marti-Parreño, 2017). Moving forward, it is imperative that companies consider where, how, and whom to implement gamification with, as well as ensuring that it has financial and managerial support. Another study done on students in virtual learning environments (VLEs) demonstrates the risk of the "novelty effect" that gamified processes carry, especially among young people. The novelty effect refers to "the tendency for user engagement to initially improve during the introduction of a novel phenomenon, only to drop once the phenomenon becomes familiar (Tsay, Kofinas, Trivedi, & Yang, 2020)." In their two-stage experiment, Tsay *et. al.* demonstrate that, while the novelty effect can power initial engagement in learning, it drops off sharply toward the end of its use period. However, when they seek feedback before implementing the second gamified VLE process, they are able to develop an experience that sustains higher levels of engagement for longer, something they attribute to the second system being designed to target student needs and generate "perceived usefulness." Considering that one of the many applications of gamification is to emotionally appeal to the younger generations as they enter the workforce, it is important to consider how a business gamification platform can be developed to target true engagement (i.e. completion, understanding, and enjoyment) rather than more quantitative analytical measures (i.e. traffic and click-through rate). That being said, younger people are also especially sensitive to corporate social responsibility and the importance of ethics in business. Consequentially, any advantage gained from youth appeal can only fully function in organizations willing to be (or that already are) transparent, equitable, and sustainable. The use of VLEs also provides an analog that can potentially be applied to companies with a base of work-from-home employees.

Company Description/Value Proposition:

GameON, short for GameON Business Solutions, is a B2B software as a service (SaaS) company that offers standardized and custom platforms for meaningful gamification of candidate relationship management, employee recruitment, and new employee onboarding. While several competing firms already offer solutions for performance management and continuous employee engagement, they do not provide a special focus on the critical early stage of the employee lifecycle. Though the use of games in the workplace is far from uncommon, GameON seeks to

help companies specifically create lasting, fruitful relationships with Millennials and Generation Z, whose childhoods were shaped by the explosion of video games as a form of entertainment. A vast majority of the members of these cohorts have some experience with games as a particularly important form of entertainment, and GameON plans to leverage that to attract and prepare candidates for customers' work environments.

From an investment perspective, GameON is worthwhile for its ability to tap into a growing market in a niche yet unfilled at a time when economies of scale are largely yet to be developed. Most competitors in human resource gamification have existed for less than 10 years, and none target the beginning of the employee lifecycle. Furthermore, it is worth noting that many of those competitors are already seeking or possess patents for their gamification techniques, which will eventually create difficult-to-surmount barriers to entry. It is therefore advantageous to enter the market now before it becomes too saturated to generate a substantial return on investment. Finally, an analysis of existing competitors suggests that the market's focus is on larger companies and enterprises; GameON seeks to provide greater access to gamification to small and medium enterprises (SMEs), especially those that prioritize corporate social responsibility, who may be able to benefit more from the brand marketing and recognition that gamification provides relative to firms with more established reputations.

Statement of Ethics:

GameON recognizes that gamification, used to deceive, is exponentially worse than any prior media used to deceive. As a result, it is absolutely paramount that GameON and its clientele be willing to conduct itself in a manner that is transparent, equitable, and sustainable at all times. When applied effectively, gamification would reveal socially irresponsible behavior by nature, so customers of GameON must demonstrate benevolent corporate citizenship to fully benefit from the latter's products. Similarly, GameON will not seek to do business with firms that are not willing to act in the way set forth in this statement.

Industry Trends:

Despite its relative novelty, gamification as an industry has already proven to be financially lucrative. Current estimates of the size of the market from a more conservative \$6 billion (Fortune Business Insights, 2020) to a significantly more aggressive \$10.2 billion (Mordor Intelligence, 2020). Estimates of the compound annual growth rate (CAGR) go as high as 27.4% (MarketsandMarkets Research Private Ltd., 2020), but even the lowest estimates only decrease that value to about 25%. Even using the most conservative estimates for both of these values, the market for gamification services will still grow by almost \$50 billion in the next ten years.

There are several industry advantages that GameON has as a firm that it will take advantage of when entering the market. GameON accordingly estimates a value of 20% for its own CAGR based on the qualifiable value of these advantages while adjusting for the smaller scale of SME-focused operations. While GameON cannot easily take advantage of the trends in VR and mixed reality, as those require client-side equipment, it can leverage developments in augmented reality, as that medium generally only requires smartphones with internet access. Furthermore, GameON's use of cloud (rather than onsite) solutions is helpful for creating easier access for clients, more efficient internal development, and reduced costs. Finally, GameON's focus on SMEs is key to both its strategic objectives and competitiveness in the gamification market. Not only has cloud-based gamification increased access to SME-scale businesses, but

larger enterprises (especially those with software backgrounds) are shifting their attention to in-house rather than outsourced solutions. Therefore, in appealing to SMEs, GameON is avoiding a declining part of the market in favor of an emerging one.

A generally agreed-upon concern with business gamification, both in academic literature and industry forecasts, is the failure of gamification implementations due to poor design. The use of BLAP gamification over the creation of meaningful play, creating initiatives without consulting end-users, and disregard of the best practices of game design all factor into this obstacle (Fortune Business Insights, 2020). GameON recognizes that many firms (especially SMEs) lack the human capital to organically grow game design as a competency, nor do they always understand the level of ethical inquiry that true gamification subjects them. As a result, its business model is built on consultation, where GameON employees work directly with clients to develop gamified processes that engage their player base and fit their business needs, as well as weeding out businesses that do not prioritize ethical conduct.

Product Offering:

GameON is the name of both the company and its core service, a holistic adaptive platform for gamifying recruitment marketing and post-selection onboarding. For the purposes of the business, “recruitment” refers to all the strategic actions taken in talent acquisition up to the filing of applications, including talent networking, candidate relationship management, and pre-job skill development. The meaning of the term “gamification platform” here is best split into its “adaptive” and “holistic” components. For the platform to be “holistic” primarily means that it shuns the common practices of BLAP gamification (whose negative consequences have been discussed at length). Instead, it focuses on developing solutions by using proven practices of effective game design (emotional solicitation through narrative, dynamic interactions between the game and its players, extensive sensory detail) within the context of a business audience of players and the necessary business objectives that the platform needs to accomplish for its clients. This also means that art and audio direction, which are generally less important in BLAP gamification, will be championed by GameON, with dedicated staff for the development of world/level graphics and soundtracks.⁶ For the platform to be “adaptive” refers to the value of custom-tailoring solutions to each client, rather than providing a standardized set of options for all customers. The platform will be built on the Unity game engine and delivered through a WebGL, an application programming interface (API) that allows for browser-based rendering of graphics across the various platforms of personal computers. Unity was chosen over the Unreal Engine for its higher-fidelity 2D and mobile development capacity.⁷ Content will be server-side rendered (SSR) in an attempt to generate consistent results irrespective of client device quality.

The individual details of the services provided and revenues gained will vary on a contract-by-contract basis with each company, but the process of doing business itself will follow a uniform model. Customer Relations representatives will work with clients to understand the key aspects of gamified business processes – what the players want out of a system, what the business wants to achieve through the system, and how a dynamic set of rules and narratives can fulfill player desires while simultaneously meeting business objectives. Solutions will likely be

⁶ In line with the increased importance of the aesthetic aspects of the game, GameON expects budgetary proportioning for its platform to be roughly 35% design, 25% coding, and 40% graphics/sound.

⁷ The initial platform will be limited to Windows, Mac, and Linux. However, a strategic goal is to expand to mobile operations, so it behooves GameON to use an engine that can create high-quality mobile results from the beginning.

shared between clients to some extent, especially those with similar business models and objectives, but every company will have a service that is in some way distinct and/or tailored to their company structure and strategic plans.

Market Strategy:

As most gamification industries have done, GameON will enter the market by obtaining venture capital funding. Based on the novelty of the company's business model and the funding records of industry competitors, GameON expects to raise approximately \$10 million in funds over its first three years. This money will be diverted primarily in three ways: platform development, personnel selection and payment, and brand marketing. The purpose of the platform development fund is relatively self-evident; GameON's first business objective will be to establish a cloud-based software suite capable of responding to the needs of its primarily-SME client base. The platform and customer relations will only be as strong as the staff driving it, so a significant portion of VC funds will be used to acquire qualified individuals for those roles and keep them working at GameON. The details of those qualifications are explained in the Organizational Structure Section. Finally, as with any startup, a substantial amount of money must be spent on promoting the brand and attracting potential customers. Considering that GameON's profit model will at least start as strictly B2B, marketing efforts will be focused on trade fairs and conventions for businesses. In particular, GameON will target events geared towards small and medium enterprises, software companies (whose field may make the implementation of gamified processes conceptually easier), and companies with high proportions of younger workers, who assign greater intrinsic value to gamification and games in general.⁸

Accounting/Legal Matters:

GameON's initial source of revenue will be the usage fees associated with consultation and the platform. This will be broken down into the two main business areas of our service (recruitment and onboarding). Additional revenue streams will follow the growth of the platform and company structure as detailed below. All financial records, including payroll, will be managed through Intuit QuickBooks. The IRS requires the use of accrual accounting (recording changes at the point of transaction) for all businesses averaging over \$25 million in yearly sales (Chen, 2020). GameON expects to exceed this number in the long term, and as such, it will use this method from the start to streamline processes in the long term.

GameON will be incorporated as an LLC in Arkansas. After establishing the business as a legal entity, GameON will immediately move to obtain trademarks for the elements of its brand identity (logo, slogan, etc.) and utility patents for its gamification platform from the U.S. Patent and Trademark Office. The pro forma income statement can be found in the appendix. Projections displayed there are an estimation of the first fiscal year. Estimates are based on a combination of market trends, existing data on venture capital, maintenance costs, salary costs, and marketing costs. As mentioned in the market strategy section, the major source of income at founding will be from equity investments with venture capital firms.

Competitor Analysis:

Based on available information, there are no other gamification companies that focus on the SME segment of businesses, nor are there any firms that provide services in GameON's niche.

⁸ Once again, this appeal is only fully achieved when a business is positively oriented on matters of ethics, the environment, and social responsibility.

Therefore, in this section, *direct competitors* refer to firms that operate in a highly similar market segment and/or those that possess the competitive impetus to expand into the recruitment/onboarding space. By contrast, *indirect competitors* include those firms that have implemented successful models of cloud-based gamification, though they focus on other consumer or market segments.

Direct Competitors

The closest firm GameON has to a direct competitor is HireVue, a global provider of 3PL talent selection services. Their primary applications are on-demand (i.e. pre-recorded video response) interviews and assessments, the latter of which makes heavy use of gamification in gauging applicant soft and hard skills. Though they do not target recruitment or onboarding as GameON does, they possess the resources, business context, and motive to eventually grow into those components of the employee lifecycle. That being said, they also present an opportunity for collaboration and/or joint ventures.

A similar competitor is SmashFly, a candidate relationship management and recruitment marketing platform recently acquired by Symphony Talent (Symphony Talent, 2019). Like HireVue, Symphony offers talent assessments designed to aid in post-application selection. However, the core of its service is an AI-driven talent network tool, which allows recruiters to create a global talent pool that they can regularly interact with, even if the members of that pool are not eligible for any available roles. Newly-opened positions can then be marketed to both internal and external candidates filtered by their qualifications, work experience, technical and soft skills, and demographics (Symphony Talent LLC., n.d.). While Symphony does not appear to use gamification within the talent network/candidate relationship platform (one of GameON's business niches), adding that functionality would be a logical business step for them, heightening the urgency and speed with which GameON must enter the market.

Indirect Competitors

Though there are no firms that target the gamification of employee recruitment and onboarding, there are several that target other components of human resources management. Undoubtedly the largest is SAP, a multinational enterprise software company. As part of its Business Technology Platform, SAP offers a gamification development component that can be integrated into other parts of its software suite (SAP SE, n.d.). Though it is difficult to determine how much of the platform's success and revenues are from its gamification arm, it is worth noting that cloud revenues constitute about 30% of an approximately \$30 billion yearly revenue for the company (Gillin, 2020). This lends credibility to the notion that providing a SaaS capable of integrating with a company's existing HR information systems is key to a profitable venture. However, as an enterprise resource planning system first and foremost, SAP is more directed at large, transnational companies than SMEs. Furthermore, its gamification services are entirely self-service, rendering it difficult to effectively use for companies that have not or cannot dedicate the time and resources to developing game design as a personnel competency. GameON acknowledges the competitive risks posed by the maturity and robust nature of SAP's services, but mitigates them by focusing more on building activist and collaborative relationships with its clients.

Most of the other competitors are startups or were startups that have since been acquired. One such case of the latter is Bunchball Nitro, an adaptive gamification platform founded in 2005 which was acquired by BI Worldwide in 2018 (BI Worldwide, 2018). Like SAP,

Bunchball’s focus is on its ability to integrate into other systems, but it also provides analytical capabilities for managers that detail the usage of, engagement in, and success of gamified work. While its financials are private information, it should speak to the confidence the industry has in its solutions that it was able to obtain over \$12 million in venture capital over three rounds (Crunchbase Inc., 2020). That being said, their focus on using game techniques such as “missions, points, badges, and leaderboards (BI Worldwide, n.d.)” is precisely the kind of BLAP gamification that academics warn is not effective in employee motivation. GameON intends to compete against Bunchball by offering a more holistic alternative that focuses on creating a gamified experience that generates work outcomes rather than using gamification as an external incentive.

While Bunchball falls short of being a direct competitor to GameON primarily due to a difference in services provided, other major firms, namely Central and Mambo.io, focus on appealing to larger companies with more enterprise-level solutions. Central is an “advanced gamification” firm that focuses on solutions in performance management, employee engagement, and remote workforce management for contact centers and sales forces. Their site advertises partnerships with massive corporations such as Microsoft, Adobe, and HP (Central, n.d.). Though their model has clearly been successful for them – they have generated over \$66 million dollars in venture capital over the last decade (Crunchbase Inc., 2021) – they focus on different HR processes at a different scale than GameON.

Finally, Mambo.io is somewhat of an enigma in the gamification industry – unlike most solutions, which are cloud-based, the majority of Mambo’s services are provided onsite, a structure that inherently lends itself to larger organizations that are already more likely to make use of dedicated intranets. Like SAP, their platform focuses on adaptability and customizability on the client-side (as opposed to GameON, which makes those adjustments internally). It is worth noting that Mambo has added a cloud service specifically targeted towards SMEs, but their advertising still focuses aggressively on their original model. Furthermore, they do not address the issue inherent in providing a self-service system to those customers – that they often lack the resources to implement meaningful gamification on their own (Mambo Solutions Ltd., n.d.).

Organizational Structure:⁹

Upon founding, GameON will have 10 full-time employees. The leadership team will consist of the CEO and their direct reports – the CFO, Platform Development Lead, and the Customer Relationships Lead. The CEO and CFO will lead strategic planning and strategic direction of the firm with input and support from the functional leaders. In addition to supporting the C Suite, the Platform Development and Customer Relationships Leads will manage the two major functional areas of the business, explained in greater detail below.

GameON’s primary value chain will consist of a Customer Relationships and Platform Development department. These divisions are designed to streamline workflow as much as possible. The Customer Relationships department facilitates customer acquisition and the translation of their needs into gamified processes. Rather than a business having to directly communicate its player needs and business objectives to developers, they work with a CR representative who essentially understands “both sides” of the process and can translate between them. This ensures that SMEs without a knowledge base for gamification or game design can still achieve effective results. While CR representatives will not need to understand game design

⁹ For an organizational chart, see Figure 7.

from a technical standpoint, they will be expected to understand it conceptually. Generally speaking, conceptual understanding refers to the ability to generate a system of rules that creates system/player interactions which, in turn, gives rise to emotional responses.

The aspects of platform development will be split into three functional areas: design, coding, and art. In the context of GameON's business model, a "Design Expert" is capable of making games *conceptually* – how to create rule-bound systems, how to define possible interactions, and how to use narrative content to drive emotional and business goals. Design Experts will be scouted mostly from those with demonstrated project management experience, as that skill set aligns with the notion of creating a thoroughly documented process with explicit, clear goals. The role "Coding Expert" specifically refers to individuals capable of making games *technically* – or from a programming, testing, and deployment standpoint. In hiring initial candidates, GameON will seek out individuals with records of successful game development, especially at small or indie publishers. The emphasis on small publisher experience is designed to draw out candidates with experience in condensing and capturing the essence of games, a development tactic that should prove useful for the simplified, smaller-scale needs of SME clients. Finally, an "Art Expert" is someone who is capable of making games *aesthetically*¹⁰ - of using high-fidelity graphics and sound to create visual and auditory stimuli which power engagement in the system and other objectives. GameON will seek individuals primarily with experience in marketing and music to fill this role.

Future Strategy:

This section details an overview of the previous sections (namely the product offering, organizational structure, and market strategy). It also explores potential opportunities for joint ventures with industry analogs and other long-term partnerships. It is divided into projections of what the company could do during its growth (i.e. 3 years) and maturity (i.e. 5 years) phases. While these changes will likely occur gradually throughout the life of the business, the goal of this section is to set measurable, time-bound business objectives.

3 Years

The growth phase of GameON will see an expansion in product capabilities, organizational size, and company priorities. By this point, GameON's direct competitors, namely Symphony Talent and HireVue, have likely tried to enter its market space. In order to combat this, a key priority of product development will be to grow the capacity for pre-screening and talent assessments. These are delivered by competitors in the form of games not centrally related to the content of the job, but peripherally related to the skills that the job requires. Not only will this enrich the services that GameON can offer to its customer base, but it provides access to an aspect of gamification with a market cap in the tens of millions.

Organizational changes will have to be made to accommodate for the scope creep of the product. To achieve this, the game design team, which until now has been a unified strategic business unit, will be segmented based on the three key aspects of game development discussed previously: systems design, technology/coding, and graphics/sound. The existing Development Lead will transition into a Chief Developer Officer (CDO) role, who continues to report to the CEO, but now also manages the managers of each software team.

At this point, GameON has likely established effective avenues for obtaining and maintaining customers, but in line with its statement of ethics, it needs to be an active participant

¹⁰ Note that this is Schell's definition of aesthetics, not the MDA approach.

in the communities that it operates in. To achieve this end, GameON will divert resources to the development of educational tools and class materials. Enterprise resource planning platforms like SAP and customer relationship management platforms like Salesforce frequently provide educational access to their software. In both cases, the use of educational programs serves to grow technical skills associated with using the system in the emerging workforce and to promote its solutions amongst a greater audience. By providing such materials for game design and development programs in college, GameON hopes to foster potential candidates in filling the growing number of roles on the game design team. A parallel set of resources for management programs will spread the brand of GameON to young professionals that can collectively drive a new customer base for the company.

5 Years

The maturity phase of GameON will be characterized primarily by an expansion of the organizational structure and the scope of the platform's capabilities. The end goal of this stage is to, whether through collaboration or competition, create a gamification platform capable of serving the entirety of the employee lifecycle. All parts of the platform will remain modular, as it has throughout the process, but system-wide use will be encouraged through discounts and the inherent benefits of standardization. Organizational changes will focus on expanding GameON's adaptability to differences in client industries. At this point, the game design team has already been subdivided by business processes; the customer relationships team will now be similarly split by general fields of business. Much like the CDO, the CR Lead will become the Chief Customer Officer (CCO), whose direct reports include the leaders of the newly-created teams. Though the exact proportions and organization will vary based on the demographics of the clientele, separate teams are expected for companies in health and education, accounting and finance, and software and technology. An additional team will be dedicated purely for the purposes of marketing and new business acquisition.

In keeping with the company's support of educational software and to encourage further growth in the industry, GameON will dedicate resources to the development of easily accessible tools for business game development. This will happen in one of two ways: GameON will either prepare to release a legacy version of its platform or fork the existing system into a smaller model with more restraints and technical limitations. In the case of the legacy version, this will serve as both a goodwill and marketing tool; by democratizing a historically proven business solution, GameON will increase its brand presence and improve its public perception. The microcosm model will be more responsive to industry and academic developments in the best practices for gamification implementation. Either way, the result will be publicly released on the Unity Asset Store at a cost that is reasonable for an individual developer to afford.

Finally, at this stage, GameON will consider how to expand beyond the realm of internal gamification by developing corporate solutions aimed at consumers of the various members of the clientele. An often-neglected part of the candidate attraction process is how companies can create paths from consumers to employees. As such, GameON will develop a module in its system capable of generating consumer-facing games that detail clients' mission, vision, and goals, as well as operational and strategic direction.

Appendix of Figures:

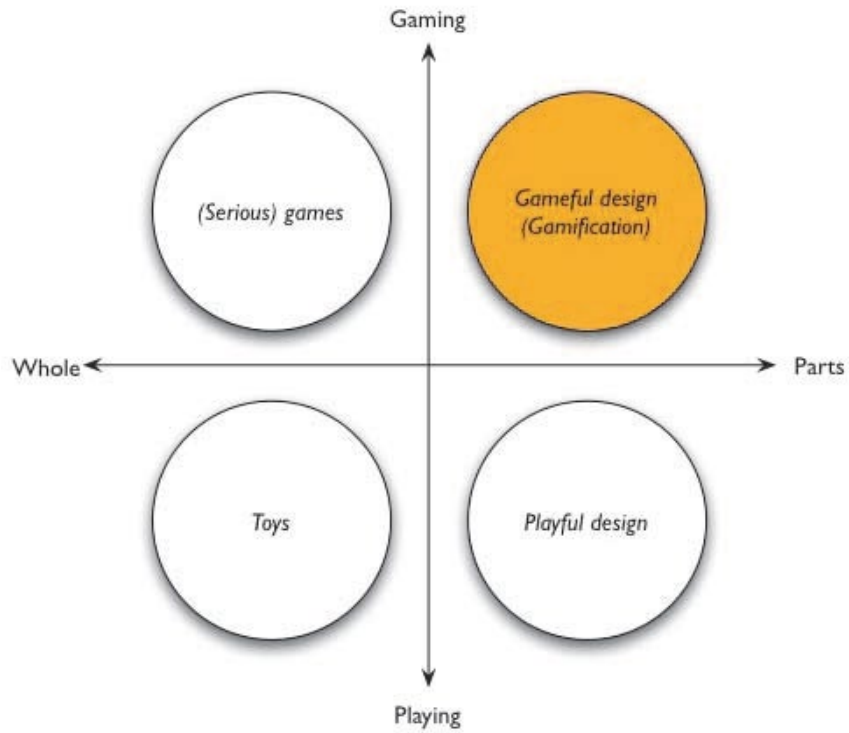


Figure 1: The axis on which Deterding et. al. define gamification.

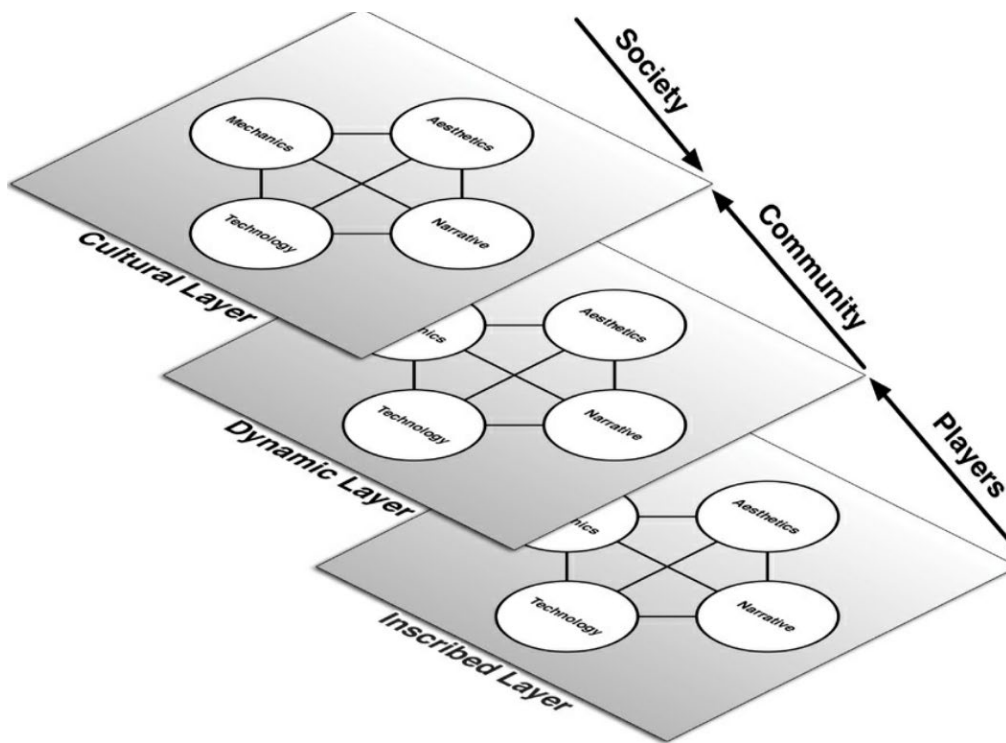


Figure 2: Bond's Layered Tetrad.

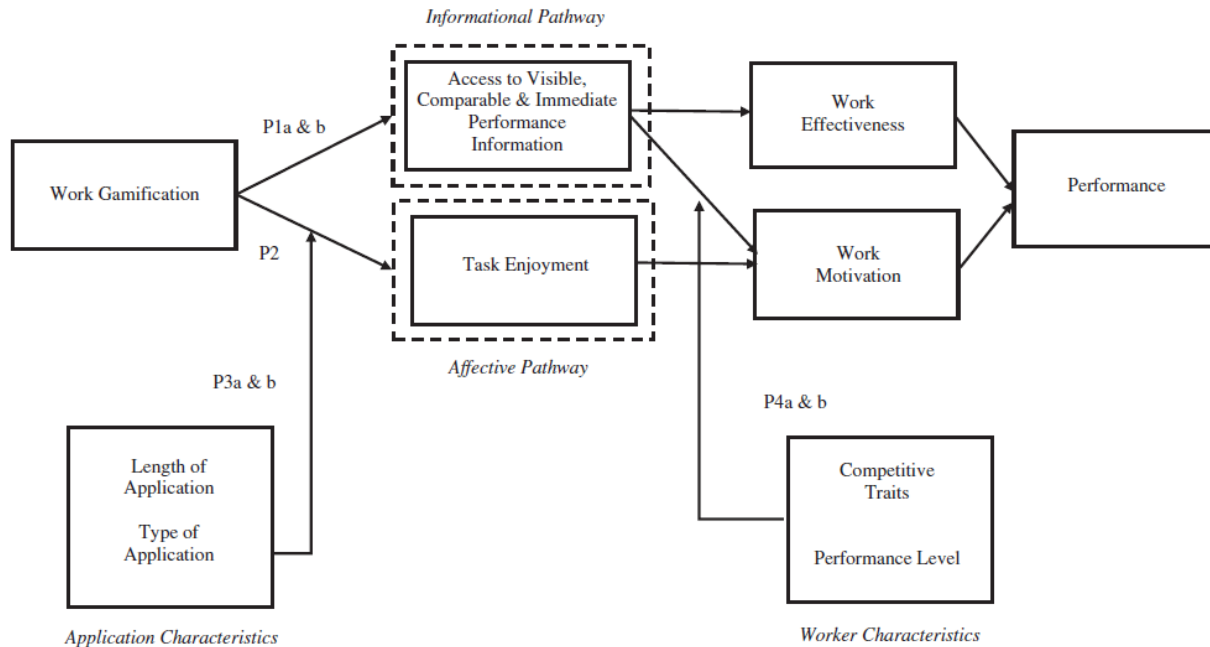


Figure 3: Carador et. al.'s theory of work gamification.

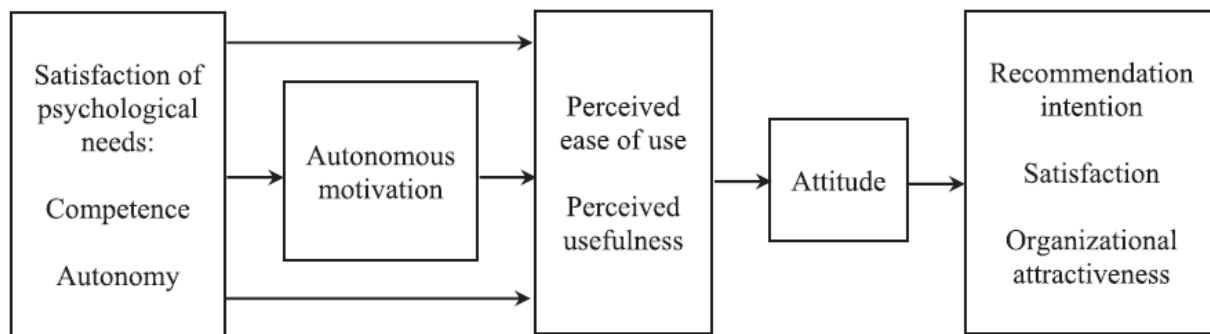


Figure 4: Buil, Catalán, and Martínez's model of how gamification drives recruitment through the SDT and TAM.

As an accredited Gamification Designer, I pledge my best effort to act in accordance with the following principles when creating systems of engagement:

1. I will strive to design systems that help individuals, organizations and societies achieve their true potential, acting consistently with their values and enlightened interest.
2. I will not obfuscate the use of game mechanics with intent to deceive users about the purpose or objectives of the system.
3. Where practical by law and contract, I will make an effort to share what I've learned about motivating behavior with the community so that others may leverage this understanding to advance society and the state of the art

Figure 5: Gabe Zichermann's Code of Gamification Ethics.

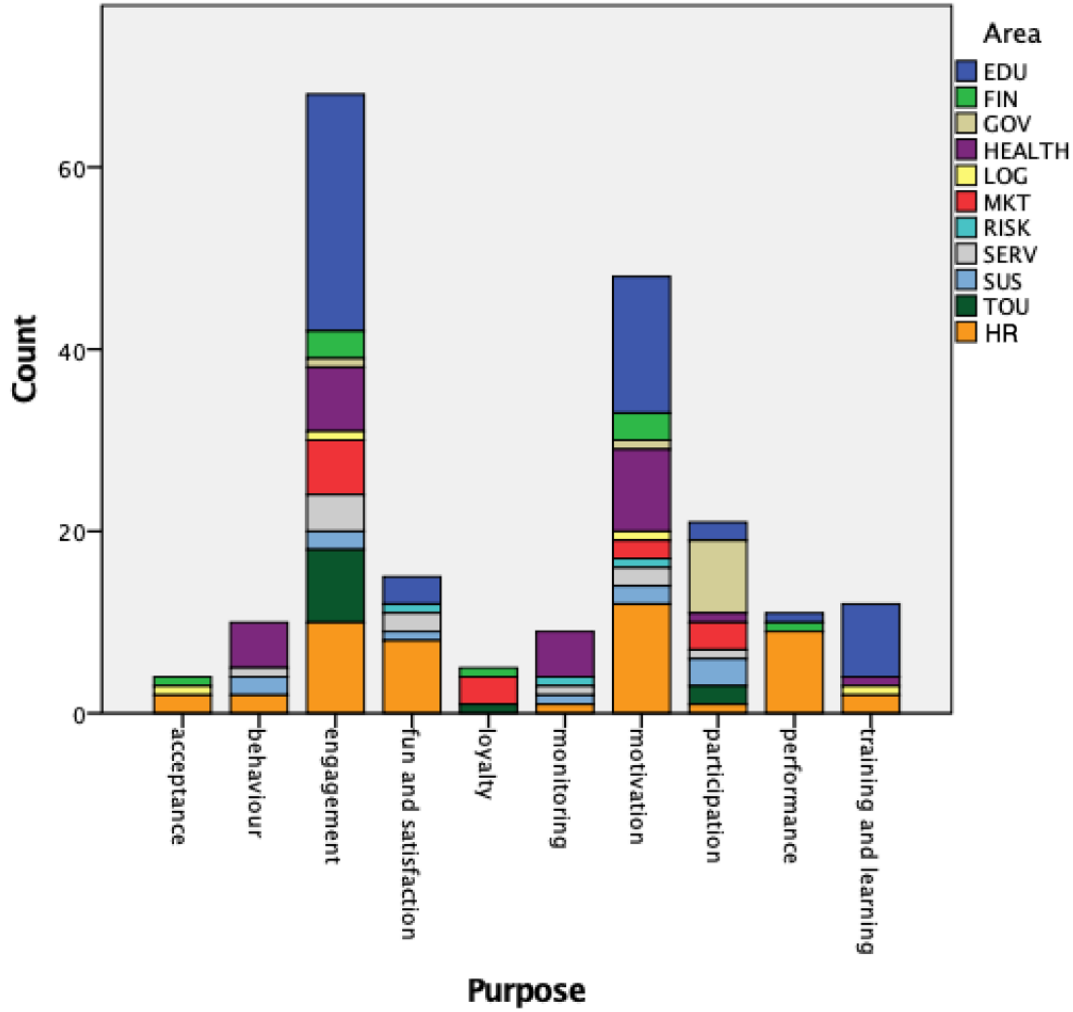


Figure 6: Wanick and Bui's analysis of the purposes of gamification, separated by functional areas such as education, finance, marketing, and HR.

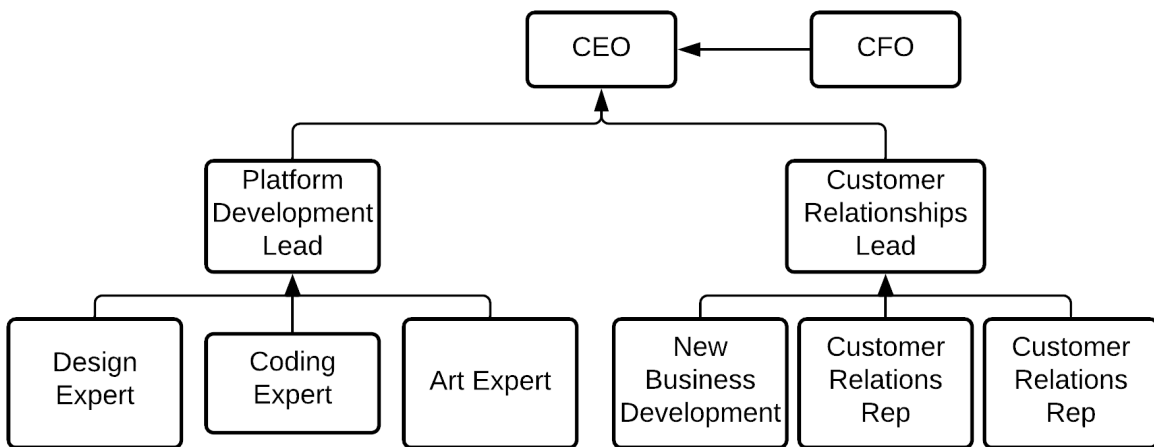


Figure 7: GameON Organizational Chart

Year	2021	2022	2023
Revenues (including VC)	\$4,000,000	\$3,120,000	\$5,440,000
Expenses			
Platform Development/Maintenance	\$1,635,000	\$1,409,000	\$2,557,000
Salary Costs	\$815,000	\$940,000	\$1,081,000
General and Administrative	\$150,000	\$175,000	\$200,000
Marketing	\$600,000	\$500,000	\$450,000
Total Expenses	\$3,200,000	\$3,024,000	\$4,288,000
Earnings Before Tax	\$800,000	\$960,000	\$1,152,000
Taxes	\$200,000	\$240,000	\$288,000
Net Earnings	\$600,000	\$720,000	\$864,000

Table 1: GameON Draft Income Statement

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