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Gamification as a Solution

An introduction into gamified solution design



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An introduction into gamified solution design at *Organiq*

Introduction

Gamified solutions have been around for a while now and pop up in various places, but what are they exactly? In a most basic and broad definition, gamified solutions are applications developed with game technology and design principles whilst having training, situation simulation, or education while entertaining the user as its prime purpose. This shows that e-learning in itself does not equal a gamified solution, it is the addition of game technology and design principles that brings e-learning to the next level. This addition is Organiq's specialty.

But what does Organiq add exactly? At Organiq, we add to this by specializing in behavioural change. Most important in behavioural change is the idea that behaviour learned in a game needs to cross the so called *game-boundary* into reality. This can have a variety of possibilities. We could do anything from trying to have people use more sustainable ways of transportation or trying to teach kids to be less afraid of school exams through entertainment in education. Underneath behavioural change lies a myriad of theory, all of which needs to be compacted into logical and manageable parts in order to be brought it into practice.

The key to designing gamified solutions that aim to change behaviour lies in its underlying structure. Important to note is that this structure is not a single road but a network of interlinking concepts. These concepts are **Fun, Binding, Status Providing** and **Motivation**. At a basic level, these concepts are categorized in two main sides of an equation. The first side takes the human aspect in to account: The **Player**. The other side takes an outward approach and looks at the concept of **Play**, both on a systematic and a metaphysical level.

In this paper an introductory insight will be given into these two concepts. A simplified version of the gamified solution design model used at Organiq is added to the appendix to visualize the design path towards behavioural change.

The Player

The first question any gamified solution or game designer must ask himself upon starting a project is 'who is playing?'. Of course this question is not easily answered, but at the base of this question are the so called *gamer archetypes*, to which a game must cater in order to be attractive in the first place.

Player Archetypes

It all starts with the **Explorer**. This is the gamer that wants to find out all there is to know about a game. They want to explore every inch of the map, find all hidden treasures and want to know more and more about the story behind the game. In terms of behavioural change, explorers are the easiest to get as they only need the initial hook to start playing.

Next is the **Achiever**. Achievers have similar goals as Explorers, but with one essential difference: They need acknowledgements in order to feel happy. The idea of having rewards in games thus agrees most with Achievers and are vital if the goal is behavioural change. Achievers work solely on a *quid pro quo* basis and need these rewards.



Figure 1 Player Archetypes

Rewards

*There are four basic types of rewards: **Status, Access, Power and Stuff.***

***Stuff** is the most explicit reward as it happens most often outside of games. It normally considers prizes of any kind and redeemable point systems.*

***Power** is a straightforward reward that grants a player more power over other players in game. Classic examples from games are better weapons and statistics.*

***Access** rewards often give players a benefit over players that do not have this same reward without giving direct power. Examples include unlocks, early sale access, and premium player packages.*

***Status** is the least explicit reward, but rather straightforward. It is a social construct that only works if a community is involved. Examples of Status rewards are leader boards, virtual prizes and levels.*

Logically these reward types all have their own pros and cons, but also their own specific goals. Stuff, for instance, is an early crowd pleaser, whilst Status only works on the long-term. However, Stuff is normally more expensive than any other type of reward and has a shorter longevity than long term oriented rewards such as Status and Access. It is here that a careful and balanced package of rewards needs to be constructed for every gamified solution.

The **Socializer** is the third type of gamer. Like the Achiever, the Socializer also is in search of recognition, but more so through other players and society than through the game itself. This recognition is more clearly defined as **Social Status**. A Socializer likes to game with more people, likes to interact with other players and wants to create a community that could be carried outside of the game. In doing so, the interaction goes a lot further than being able to talk or work together.

The Social Connection

This step beyond basic interaction is called the **Social Connection** and seen as a second way to overcome happiness obstacles next to rewards. The three elements of the social connection are **Happy Embarrassment** (where losing to friends is seen as fun), **Vicarious Pride** (where teaching others to be better is a reward in itself) and **Ambient Sociability** (knowing that others are playing too, which creates a sense of community).

Especially the **Ambient Sociability** is important in behavioural change. Where the age-old credo asks us to have change start on an individual level, research shows that people only do change when they have the feeling others are changing too. An Ambient Society created through a game would provide the same type of Motivation.

The fourth type of player is the **Killer**. This player type is rather unwanted. Killers do not only want to win, they need to see others lose. Whichever way you design a gamified solution, at no point will the Killer be motivated to change behaviour as he is set out to do one thing only. In doing this, the Killer is the most fanatical of all gamer types, and often falls in a non-adopt category when asked to change behaviour.

Players and design

The question remains as to how these player types influence the design of gamified solutions? For that we need to look at the player type balance. In doing so, it is important to note that the archetypes are not mutually exclusive. Rather, every player could identify with each player type to a certain degree. In general, the player type balance show that 50% of players would agree with having Explorer characteristics, 40% with the Achiever, 80% with the Socializer, and 20% with the Killer.

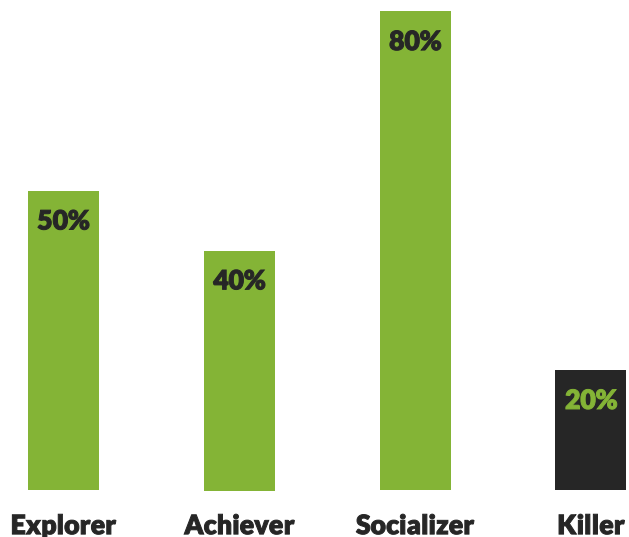


Figure 2 Population Balance of Player Types when not mutually exclusive

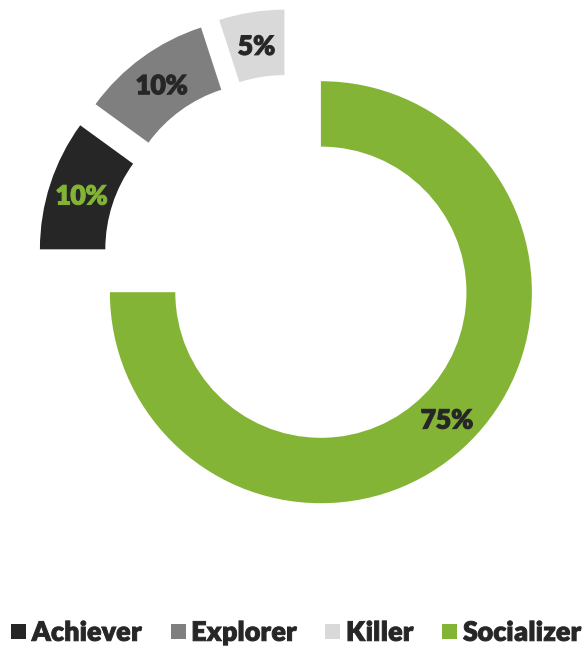


Figure 3 Population Balance of Player Types when mutually exclusive

If the types would have been mutually exclusive, the player type balance for the population would be 10% Explorer, 10% Achiever, 5% Killer and 75% Socializer.

With being dominantly present in society and having the greatest possibility to break through the *game boundary* through *Social Status*, gamified solutions should always be built with the Socializer in mind. This makes it the **first design rule in gamified solution design** and makes sure a game is able to provide Social Status.

Play

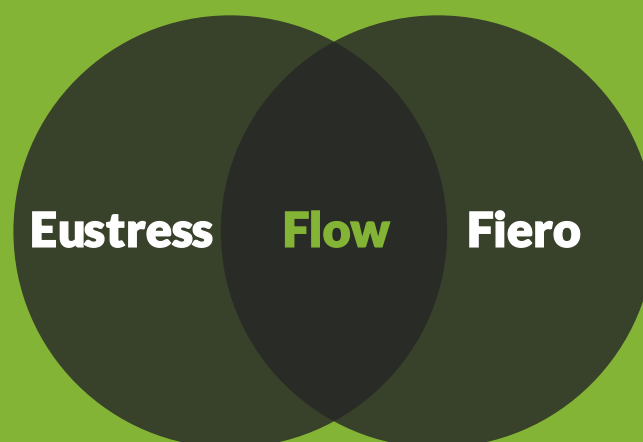
When designing a game, instinctually you know games should be **Fun**. And this is true. However, before Fun comes into the picture, the game in first instance needs to be *user friendly*. Yet whilst this relates to Fun, it is not the most basic premise. In designing the actual game environment, the focus not only shifts from why people play, to how people play, but also what **Play** actually means.

Play has been researched heavily over the past few decades, and has seen many definitions. An old notion puts Play as the opposite of work, implying that work and *Enjoyment* cannot go together, or that Play needs a large component of free will. The most current theory, however, places Play as the direct opposite of depression. Depression is clinically defined as having a despondent lack of activity resulting from a pessimistic sense of inadequacy. Inversing this would yield a definition of Play: *an invigorating rush of activity that causes an optimistic sense of capability*.

Feeling Emotional

In this new definition of Play we find there to be two strong emotions that interact heavily, but together could lead to Happiness.

*With the idea of an invigorating rush of activity comes the emotion called **Eustress**. Eustress is the opposite of normal stress. Simply put, normal stress is an outside power that forces you to do something a certain way somewhat against your will. This leads to*



all kinds of negative psychological and physical reactions that stem from a hormonal surge. Eustress is putting yourself under stress by giving yourself a target (e.g. wanting to do a 5km run in 30 minutes). Curiously, this self-induced stress has

Figure 4 Interaction between Eustress and Flow

the exact same hormonal response, but gives highly positive psychological and physical effects.

This sudden switch from negative to positive comes from the second emotion of Play: **Fiero**. Fiero is Italian and means both fire and pride at the same time. It is the feeling you get when you achieve that target you have been working towards, or when you finally defeat that one level in a game you have been trying in days. Fiero is known as the most primal emotion and was probably the main drive we had as cavemen to go out into the world.

Skills

At the right levels, Eustress and Fiero cause **Flow**. Flow is an emotional response that could be described as captivating happiness. It is often also described by gamers as being 'In the Zone'. However balancing the levels of Eustress and Fiero is not easy.

A game namely only delivers bursts of Fiero when it is just challenging enough. A game that is too hard will simply not be played, but a game that is too simple is also not perceived as being Fun. But this brings a problem, because not everyone has the same *skillset*.

However, it shows that, over time, players of the same game develop the same skillset to a large degree. This acquiring of a common skillset is known as the *Mastery Path*. It states that every player starts out as a beginner, a **Novice**. After a while, everyone becomes a **Master** or sometimes even an **Expert**.

When the majority of the gamers reach this status within a game, a game often needs new content to stay exciting for all players. As a game designer, or concept developer you already have Master or Expert status and often forget that everyone else needs to begin at the bottom. This is why in designing a gamified

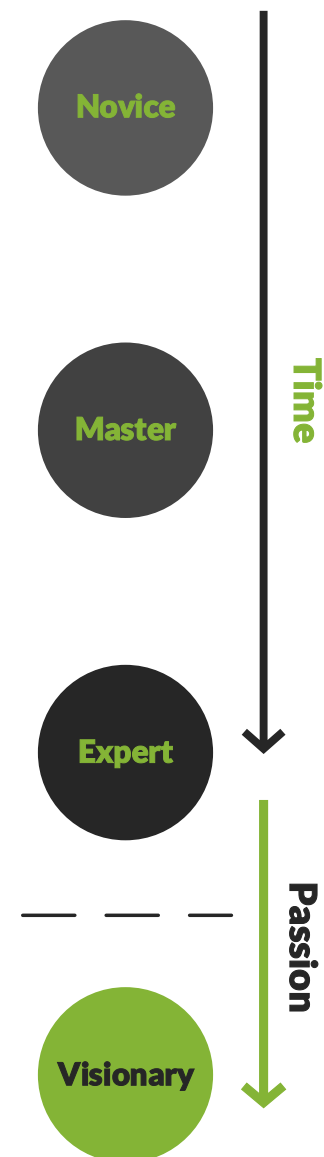


Figure 5 Player Mastery Path (Skillset development)

solution, the first few minutes of play are extremely important, it is here where a player bonds with the game. This means that *as a second design rule it is most important to design for the novice*, creating the first instances of Flow to ensure a game is binding.

Sustaining Flow

With the first instances of Flow, a second problem of design arises: *sustaining Flow*. Sustaining Flow inside and outside the game is problematic with respect to taking behavioural change beyond the game boundary. The game boundary is faded through **Authenticity**.

This doesn't mean that the game needs to resemble reality perfectly. It means that the game should feel real in its own setting. The Player needs to *believe* in what is said and needs to largely feel in *control* in order to aid the suspension of disbelief. The moment a game is pulled towards the *meta-sphere* (e.g. 'it is just a game') the game loses its critical Flow value and can no longer change behaviour.

However, this does not mean that a gamified solution needs to be **Addictive**. Oppositely to normal games, addiction is a very unwanted effect. This mostly because it pulls people too much into a game, making them feel unhappy outside of it. This then strengthens the game boundary rather than braking it down.



Figure 6 Interaction between Administrative and Addictive games in Authenticity

On the other hand, designing a game that is plain **Administrative**, reduces the game to the level of being a chore, which immediately ruins Flow. Logically then, a *third design rule needs to be that gamified solutions are designed, in a balanced way, to be Fun*. This is often best done with the use of Rewards, as these allow for regulated bursts of Flow.

Socially-Connected Augmented Reality

With these three rules in mind it shows that three main structural aspects of gamified solutions are covered: **Fun**, **Binding** and **Status Providing**. The essential final link, **Motivation**, needs to be in place to ensure that a gamified solution has the basics of being able to change behaviour. But how is this final frontier obtained?

If the three aspects named above are all at a high level, Motivation to keep playing and bring the learned behaviour into real life will follow automatically. This does mean that you need a way to assess a game based on the three design rules. A model that aids in doing so is the **Socially-Connected Augmented Reality model (SCAR)**.

As the name suggests, SCAR uses *a clear layer of gamification on top of a realistic setting in such a way that it connects people socially*. In assessing this, SCAR scores games based on several metrics which are each weighted to ensure a focus on behavioural change.

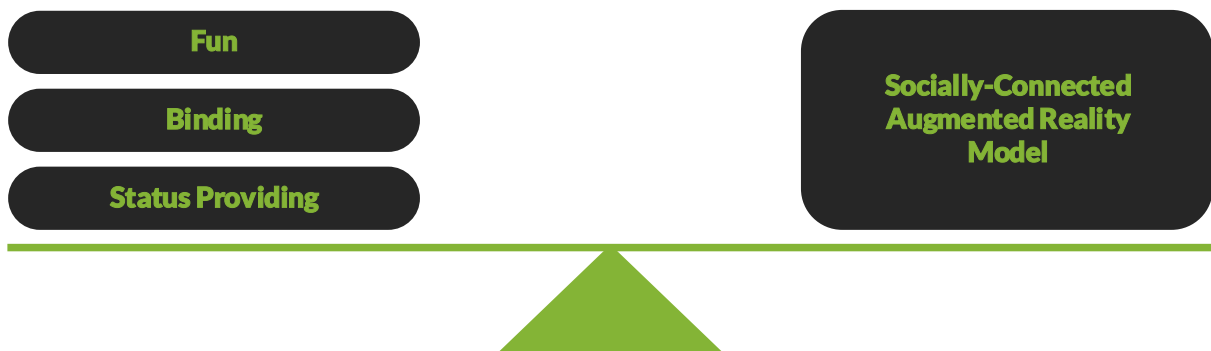


Figure 7 Balancing game elements with SCAR

Socially-Connected Augmented Reality Metrics

A first metric is **Onboarding**, which flows from of the Novice design rule and measures how the first few minutes of a game are perceived by players.

Second is **Customisation**. This metric is equally important for the Novice as for the Socializer, as it allows for distinction between users, which is good for socialisation and the need for status, but also provides a binding investment into the game.

Third is **Rewards**, which is the main metric for Fun. Important in this is finding a balance between long term and short term rewards as the influence of the game needs to be taken across the game/real-life boundary.

Fourth is the **Social Connection**, a Socializer metric. It measures the way in which socialization is needed to progress in the game.

A fifth metric is **Positive Participation**, a second Fun metric. This metric gauges Flow levels in a game, aiming for a balance that lies just below addiction. If a game scores high according to the SCAR model it has a higher probability of supplying the motivation to change behaviour.

There are more metrics in this model, but as Organiq specializes in creating the right balance of gamified elements, we like to keep some secrets.

This brings us back to the original question: How does Organiq develop gamified solutions in such a way that it could change behaviour? The key lies in a *thorough understanding of not only Game Dynamics, but more importantly the Player itself*. By knowing what players want on the most basic level, Organiq builds its projects in such a way that it motivates players to bring more positive behaviours beyond the *game boundary* into real life. Only then becomes Gamification a Solution.

Organiq, 2014

Appendix - Gamified Solution Design Diagram

