Game Thinking in Impact Technology Solutions

External Triggers to Increase Intrinsic Motivation in an Altruistic Community

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Abstract

To inspire users in an application, different types of triggers can exist and can come in many different forms, but for this report, gamification as a trigger is investigated. Gamification itself exists in many different services available and has been around for a number of years, but the interesting question is if these type of design elements will have a positive effect on an altruistic community in a civic engagement application. To investigate how this group of users react on gamification, an extensive literature review of previous studies was conducted within UX, psychology and gamification. A civic engagement application was adjusted with the help of existing frameworks and theories which were later tested with usability tests and a questionnaire called IMI measuring intrinsic motivation.

The findings showed indications of positive attitude and when using gamification, five out of seven said they liked the design. The report resulted in guidelines that can be used as an inspiration when applying any gamified elements to a civic engagement service where users are driven by helping others.
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1 Introduction

It wasn’t a focus on usability that made this a great experience. It was psychology.

*Stephen P. Anderson [3, p. 10]*

Gamified solutions have been around for many years and have shown a positive effect on users behaviour and motivation in different fields of studies [4]. Not all areas have been reviewed and the research within gamification has gone from “what gamification is” to the objective of how these theories can drive motivation in different application areas [5]. From this, the question “if gamification does have any motivating effect on an altruistic community” follows naturally. Motivation is an essential behaviour to get users to adopt the provided service regularly over a continued period. When it comes to social media and virtual communities, many of the world’s population are using these types of services [6]. During the last few years, on average 27 applications are used monthly per user, other applications tend to be left or forgotten about on the phone [7]. One example is Facebook with 1.86 billion monthly active users in 2016 [8]. All these communities and applications are very different in what they are offering the user and what user need they strive to fulfil. This user commitment is also the most challenging component for a brand and service. Most contributions in online communities come from only a small group of users, 9% adds little, and only 1% stands for most of the contributions made [9]. Impact tech solutions are not an exception, the service’s core function will only work if users are contributing with data and information and therefore, it is vital to motivate users to come back more than once.

All online community have an average overall character that should be considered when planning to influence the user group [2, p. 122]. This character can define what drives the users and why they are using the service in the first place. A virtual community can be a caring and collaborative community where the users are contributing to the care and welfare of others rather than selfish reasons. They act in an altruistic way. An example of a caring community can be a forum covering a serious topic like cancer where the members are helping each other. There are also communities that can be a direct opposite, competitive or combative where competition and egocentric incentives are the prime motivators [2, p. 122]. There is also in-between communities with a mix of these characteristics. In a community based on altruistic incentives, i.e., on the caring side of the spectrum, users can feel discouraged to contribute if their contribution is valued and compared to others [2, p. 113]. At the same time, gamification has been shown to maintain and sometimes increase the user’s intrinsic motivation [10]. Just because the user may feel drawn to the community, it does not imply that the user is willing to contribute and
engage. Instead, triggers can, and will when targeting the user correctly, increase user engagement.

This thesis is conducted by the author together with support from both Antrop and Klarity during spring 2017 in Stockholm, Sweden.

1.1 Objective and Aim

The aim of this study is to investigate triggers that can create an effect for engagement and motivation in an altruistic community. These types of triggers can be represented as gamification in a service and aim to keep the user motivated over a longer period. A gamified application will be used during usability tests. Further, the report will clarify how these triggers can be applied to influence positively on the user’s motivation. The purpose is to determine differences in user motivation when it comes to triggers as game design elements and to accomplish the aim, following objectives has to be answered.

- Investigate if game design elements will create motivation and engagement to continue to use the service.
- Investigate if game design elements will have a demotivating effect on an altruistic community.
- Show that gamification can increase user motivation in a civic engagement application.

To measure users motivation usability tests will be conducted together with a questionnaire called Intrinsic Motivation Inventory [11].

1.2 Klarity

Klarity is a startup working to help citizens reveal corruption and give transparency to petty corruption. They believe that if citizens can report events that can be classed as corruption or social injustice on Klarity’s platform, making it more transparent, then corruption can be stopped altogether. The event of corruption can be reported on Klarity’s mobile application by the user, and the case will then be open for other users to investigate, confirm and spread. Klarity is fully owned by the non-profit foundation Norrsken\(^\text{1}\). The project started in late 2016 and in 2017 a proof of concept application will be developed. The service is planned to first launch in Ghana and Kenya where petty corruption exists in the society [12].

\(^\text{1}\)Norrsken Foundation https://www.norrskenfoundation.org/
1.3 Antrop

Antrop is a service and UX design agency focusing on customer experiences and designing services users want to use and need [13]. Antrop was established in 2001 and today has more than 35 employees. Gamification itself exist in many different services available and has been around for a number of years, but the interesting question is if these type of design elements will have a positive effect on an altruistic community in a civic engagement application based in Stockholm. At the time of this theses, Antrop provides Klarity with two consultants within UX and service design. This report aims to give Klarity more insight in the topic with supervision and support from Antrop.

1.4 Limitations

A limitation will be to identify engagement and motivation in a test environment compared of in a natural setting which might affect the result. Due to Klarity’s launch in Ghana and Kenya, it might be challenging to contact enough Klarity users to conduct usability tests. The group of people to focus on are driven to help others in situations like corruption, but this feeling and motive can be difficult to recreate in a test environment. These limitations will be addressed and taken into consideration when designing the research and method section, and later when the result is analysed. Triggers include a significant amount of both external and internal triggers, and therefore, the focus will be on the game design triggers that can be added to a service.

1.5 Background

When someone is acting out of a unselfish way and putting others needs before their own, it can be referred to as altruistic behaviour. Altruism exists naturally in nature, both among humans and some animals [14]. The focus in this report is the presence of altruism in social entrepreneurship that can exist both from a business perspective and from the user’s side. Klarity is hoping to attract users driven by altruism to expose social injustice as their core group when launching the service in the near future. Klarity aims to start in a country with a substantial level of petty corruption and social injustice. To make sure the content and service are evolving over time, both with content and with the number of active users, it is essential for the business that their users are coming back to the platform regularly. A challenge is to stimulate the user’s interest and attention among all the other triggers exposed around us daily. Therefore these triggers need to stand out from the rest and trigger intrinsic motivation and just the behaviour a user is willing to attend to.

To stand out from the rest, it can be enhanced by using different types of triggers to try to stimulate the intrinsic motivation. Previous research and frameworks on triggers exist, but the challenge is to investigate if these apply to an altruistic community caring about a particular topic close to heart. This report will look at gamification as a trigger to create more engagement from the users, and an attempt
to measure if an altruistic community in civic engagement applications will benefit from gamification. The base level criteria for a service that can be measured with qualitative methods are functional, reliable, usable and convenient; all focused on the task. The top level criteria, pleasurable and meaningful, are harder to create and concentrate more on the user experience [3, p. 12], see Figure 1. It is therefore in Klarity’s interest to investigate the use of gamification in civic engagement to raise the level of user experience and commitment.

![Figure 1: User experience hierarchy of needs, from basic product function to meaningfulness.](image)

Current applications and platforms used to promote and encourage people to civic engagement on different levels can be found, but none with the same aim as Klarity. Examples of these services are change.org, Gift a meal, kiva.org and many more. For users promoting and helping each other, it is not only these platforms that are used, but also popular services such as Facebook, YouTube and WatsApp is frequently used.
There is research conducted on gamified solutions with different research questions and field [5]. The research gap this report intends to fill is how gamified triggers are to apply on an impact tech service in countries with existing petty corruption and how these triggers work to increase user motivation. During the last decade, gamification has been a popular theory, Figure 2 but is sometimes used without understanding the theory and how to apply it to make a difference for the users [15, p. 17].

There have been opinions from Klarity that no pure, or playful, gamification should exist in the product in forms like badges or leader boards, but at the same time, a desire to rank users at different levels to indicate progress have been discussed. This contradiction is the starting point of this thesis. Further, a clarification of the various levels of game design will be covered, and theories from psychology and design will be listed to support implementation choices. Concrete design proposal will be evaluated and finally result in recommendations of how impact tech companies working with altruistic users can and should implement gamification in their designs to create more user engagement.

1.6 Thesis Outline

Chapter 1 includes an introduction to the topic, the background and why this is of interest for anyone developing a civic engagement application, including Klarity. Chapter 2 introduces the theories, previous research but also frameworks used to develop gamified solutions. Chapter 3 includes a more in depth step by step guide for gamification, chapter 4 the method used and chapter 5 a competitive review. The result can be found in chapter 6, discussion with guidelines in chapter 7 and conclusion in chapter 8. In the back of the report, appendix can be found.

The design process used for this report is the Double Diamond [16] and is divided into four parts; Discover, Define, Develop and Deliver (see Figure 3).
Figure 3: Double diamond visualisation, from Discovery to Deliver.
2 Theory

A broad theory summary from different fields of study is presented to illustrate the question and theories around the topic. Theories from previous design research are present, but also frameworks and findings within cognitive psychology.

2.1 Civic Engagement, Social Entrepreneurship and Impact Technology

A definition of civic engagement can be found at America Psychology Association’s (APA) website as “individual and collective actions designed to identify and address issues of public concern” [17]. According to APA, civic engagement can come in the form of individual voluntarism, organisational involvement and electoral participation [17]. Social entrepreneurship is when people and companies have a strong drive to do good in the world by helping others, the environment or the society through their business. The business is still a business that, in some cases need to make earnings, but the central focus is the difference they can make in this world. Social entrepreneurship is present in all fields, not just technology. Technical solutions can also be called impact technology but refer to the same concept. One example is Norrsken Foundation that funds social entrepreneurs that want to make a difference in the world and one of these companies is Klarity.

2.2 Corruption

Klarity is building its community and service around exposing corruption. It is striving to attract a caring community around this topic and societal questions. There is no universal definition of corruption, and depending on the field, different interpretations can be made to fit the context. UN defines corruption as “...a crime committed by officials (public or private) abusing of their role to procure gain for themselves or somebody else” [18] and Transparency International defines it as “...abuse of entrusted power for personal gain” [19]. As a summary, it is clear that it includes that someone is taking advantages of their role or position for personal gain.

Ghana and Kenya can be found positioned at 70 and 145 out of 176 countries in the Corruption Perceptions Index 2016 and are therefore classed as highly corrupt [20]. They also have an active group of citizens fighting to end corruption, according to Klarity. These countries are focused on because of Klarity’s aim to launch in one of these countries during 2017 but also due to their possibilities to collaborate with partners in these countries.
2.3 Altruistic Behaviour

The definition of altruism had been around for about 150 years and was first introduced by Auguste Comte from the Latin word *alter* which means "other" [21, chapter 1], but the behaviour had been around for longer and can be found both in humans and animals. The focus of putting others needs before your own, according to NE [22], and can be seen as the opposite to egoism. In different communities, both in the real world and in the virtual, altruism exists. According to Greater Good Science Center [23], there are some things that can be done to cultivate and inspire an altruistic behaviour. This includes; (1) give a feeling of being connected to others, (2) be personal and see the people, (3) encourage collaboration and shared goals, (4) acknowledge giving and finally, (5) help build a supportive community, just to mention a few.

Previous research has investigated the competitiveness for altruism and identified that people are more willing to contribute when they can have a reputation of being altruistic and are also competing to be the most altruistic in some cases [24]. This finding goes against Farmer [2, p. 113] that claims that people driven by altruism do not want their contribution to be counted, recognised, ranked, evaluated, compensated or rewarded. The author further stated that comparing their contribution to others will discourage the users from participating. Other behaviours, where users are contributing to improving the society and acting kindly toward other in the hope of receiving the same response back, called pay-it-forward incentives, is a model that can be used to cultivate and expand the altruistic behaviour [2, p. 114].

In an online community, there are different stages on the competitive spectrum where users could be placed on which should be considered. These includes; caring, collaborative, cordial, competitive and combative. The stages range from a typical altruistic community to a very egoistic [2, p. 122].

2.4 Why People Help

According to Guy and Patton [25] there are five suggested approaches to considerate when designing for donations from an altruistic group of people. The first suggestion is the need to provide the satisfaction which includes giving recognition to the donor. Important to have in mind is that external rewards often only satisfies secondary needs. Also, these rewards can even be counterproductive if the basic intrinsic need is overshadowed. The second recommendation is to generate awareness, i.e. make it clear that someone needs help and that someone should aid and indicate that the help is urgent, immediate and severe. More, the donor must feel that the individual need help and deserves it. It is important to portray people in need as if it is not their fault they ended up in that situation and show that they can not help themselves out of it. Further, it is important to give a sense of personal responsibility, and a one-to-one contact should be implemented. The network built need to consist of people willing to recruit others to spread the word and ask for help. Potential donors must not feel that their contribution are critical for the success of the campaign, but for the ones in need. The donor also needs to be convinced that they have the ability to help but also, that their donations will help. As a final step, it is vital to remove as
many barriers as possible for the user and make it as easy as possible to contribute [25].

2.5 Behaviour in Communities

The way a community and digital platform is built will most certainly also affect the user’s behaviour. The tone and norms introduced in the service can create a group of like-minded people to get together and are also a goal of the company behind the service to strive towards. Communities character is most likely created out of a mix of people with different aims, but a community can be regarded to have an overall style [2, p. 122]. In the competitive spectrum, see Figure 4, a user’s primary purpose and drive for engaging are displayed. The competitive spectrum has, on the left side, users with a caring behaviour that care about other people. They want to help others in situations they have been in themselves, can relate to or questions and areas they have a lot of previous knowledge about. On the other side of the spectrum to the right, there is a group of combative users whose primary goal is to win and do everything they can to get there and gain personal benefits regardless of other people around them. One example of the right side of the spectrum is a competitive computer game [2, p. 122]. All these behaviours can affect other members but even more interestingly, how can this community be extrinsically motivated to take more actions within the application and feel intrinsically motivated to come back?

One hypothesis is that Klarity’s users will, in some scenarios, act out of a caring perspective if looked through the competitive spectrum. This is based on current personas developed by Klarity and fit the overall behaviour this report is interested in examining further. Other factors motivating users, identified by Klarity, can be the want to get justice, anger about the current system and will, therefore, fall into other groups in the competitive spectrum. The number of competitors can also make a difference when it comes to users motivation. A small group will increase the person’s motivation to do as good as possible, but in a large group, it seems like people are giving up before they even started [26], the task might be too big even to consider.

![Figure 4: Competitive spectrum. Left side of the spectrum is people caring about each other in a non-selfish way. The right side indicates the opposite, pure competitiveness and combative behaviour with egocentric aim [2, p. 122].](image-url)
2.6 Contribution in a Online Community

Research has shown that a user is more likely to contribute to the community if the user knows the value for them for doing so [27]. Also indicated value to a subgroup instead of the community as a whole increased the contribution and an increased contribution when a user identified with the group [27]. Working in a group can influence how hard people work due to the perception of the importance [28]. People tend to post and contribute more to an online community when they feel they have a unique knowledge and the information that can contribute is unique. It is also shown that users contribute more when feeling dissimilar in a group, due to the uniqueness. [28, 29]

A reminder to a user about the benefit of the action for everyone involved increased the contribution rate, compared to when only benefits for them self or for others was highlighted. It is not as simple as just remind users with text why they should take a particular action as an attempt to motivate their intrinsically directly. Research shows that this can instead decrease the user’s motivation to contribute [28].

2.7 Gamification

Gamification has been around for many years, but the word Gamification was coined in 2002 [15, p. 16]. The word itself has been announced a “deliberately ugly word” [15] and some claim that the word itself does not describe the theory in a reflective way. Gamification can be described as the “use of game mechanics and experience design to digitally engage and motivate people to achieve their goals” [15]. A breakdown of the gamification description is as following; (1) game mechanics are elements used in games, (2) experience design is the journey taking place with the elements. (3) Digital engagement refers to people’s interaction with smartphones, computers, etc. (4) A goal with gamification is to motivate users to develop skills, drive innovation or change behaviour, and finally, (5) when a user achieves their goals, the organisation reaches its target [15]. It is the use, rather than the extension of design elements characteristic for games in a non-game context [30]. It further refers to gamefulness, and not playfulness. In fact, gamification can be applied to applications to help solve a problem and create a motivation to do so, rather than just creating a gameful experience. One example is Pain Squad that was created for children with cancer to report pain. In this application, a police team are looking for the pain to stop it together, and this will increase the motivation to report pain from ill children. All data collected is sent to the patient medical team so they can get a better understanding of the illness and the patient’s condition. This example implements game design to collect valuable data [31].

It is important to integrate the service’s activities into the game design, and it is beneficial if the game elements and the work that need to be accomplished has a strong interplay [32]. When creating a service with game mechanics, it is important first to identify the business goals and the user activities that drives value to the business. It is also vital to understand what motivates users to engage with the business and also the user’s goals. Intrinsic motivation from the user need to exist, motivation does not occur by just adding game design elements into any service
On the other hand, if core intrinsic value exists, game design can work to deepen the user engagement and continue to motivate the user to interact with the service. A literature review investigating 24 empirical studies, all with the higher level question “Does gamification work?” has previously been carried out and found, in almost all cases, that gamification worked, event though a few signs of the opposite existed. Gamification works differently on different user groups, and therefore they might react differently to different game design. Previous research shows that intrinsic motivation did not get affected by game design elements but did increase the contribution, at least short term. Other findings did not see any significant positive results with gamification, and sometimes competition can hurt contribution from people motivated out of altruism. Findings in previous research claim that the longer a game continues, the less the people gave.

What drives online behaviour is social capital, not economic capital, and has to do with an individual's status, identity, reputation, and a lot of other naturally occurring intrinsic motivators. Open source project and service like Wikipedia exist because users' intrinsic motivation to contribute. Important to remember is that when adding external rewards to a service like this, is a significant chance that the intrinsic motivation and passion will be suffocated or lead to a different or unwanted result. This fact is interesting to keep in mind when exploring the way external rewards can be used in a service as Klarity to motivate the users to contribute more.

The Prize

A game layer can make a task more fun or enjoyable but it is important to remember that all collected prizes are signs of challenges completed, feedback received but are only meaningful if they are showing some part of the user’s identity. The intrinsic motivation needs to be present, otherwise, the effect will be short-lived. The different rewards available to use which encourage and recognise behaviour are points, levels, scoreboards, achievements, badges and assignments, just to mention a few.

Points can be seen as the base level currency and can be used to reach new levels, or help out in other ways to exceed in the game. Levels are useful to indicate the state of the user.

Scoreboards are a way to quantify any data for the user to know how they are doing and to show statistics that might inspire the user's behaviour. Achievements are a good way to create a temporary boost for the user to explore something new. Badges are a way to recognise the user's accomplishments. These are not just used in a digital interface, in fact, they have been around for a long time, and a clear example is the badges Scouts receive after completing a task. Finally, an assignment is a short structured player journey that gives the user direct feedback on the short-term goal.

Wikipedia https://www.wikipedia.org/
2.8 Motivation

Motivation is an important factor when designing an application to increase the user commitment, and two dimensions exist including outcome-focused and process-focused motivation. The outcome-focused motivation is about completing a goal, and the process-focused motivation focusing on the process to attend rather than the outcome. Process-focused can further be divided into subgroups; means-focused and intrinsic motivation (enjoying an experience) [36]. Both types of motivations should exist in an impact tech platform and depend on the status of the user. If a user wants to get justice for a specific event, the outcome is the most important, but for other users, the journey to create a bigger change in the real world might be the reason why participating and, therefore, the process is more motivated than the goal.

When designing for rewards it is important to focus on intrinsic rewards, not external rewards [37, p. 126]. People want to know they are making progress, but also learn and master knowledge [37, p. 127] and do activities they feel inspired to do and not just tasks they are paid for [37, p. 130]. This leads to the three elements referred to when discussing intrinsic motivation. They are (1) autonomy, (2) mastery and (3) purpose according to Pink [38]. These three elements can be applied to different areas, but here they are looked at in the context of gamification [15]. (1) Autonomy is the strive to direct our lives. When a person started to participate in a gamified solution, they will make choices about how to proceed through the challenges to reach their goal. Different paths are given to the user to learn and discover. (2) Mastery is the urge to become better and is the journey for the user. People can sometimes lack the motivation to take the first step, and this is where gamification can be used as a way to engage and onboard users to be better. The last one is the (3) purpose, and it is to do something larger than ourselves. A gamified solution is different from a game due to the purpose. Gamification is focused on changing behaviour, developing skills and driving innovation which start and finish with primary user goals and purpose [38].

When people get motivated and engaged in tasks, they also experience strong emotions attached to the task and goal. It is, therefore, suitable to create empathy and stories around data, instead of just presenting raw data. Stories invoke empathy which can trigger emotions and the memory centres [37, p. 168] can, therefore, be used to motivate engagement and contribution through a gamified solution. People also want to feel like they are in control when making a choice. It is not just as easy as putting many options in front of the user. Too many choices make it more complicated for the user and can create a negative effect [37, p. 208].

Goals are important, and research states that people work harder when they have a concrete goal instead of a vague definition or not a goal at all [39, p. 36]. Challenging goals have a positive effect on performance; people set higher personal goals than usually, and they stay longer with the task then they normally would. Goals also increase the effort towards behaviour that affects task completion and finally, achieving a goal enhances self-efficacy and future goal commitment that results in an upward performance spiral [39, p. 36] [28]. Other studies have seen that if a task is too trivial and easy, users will lose interest in completing it due to the lack of challenge as seen in Figure 5 [3, p. 162][15, p. 69]. People are more likely to return
to a service if a particular goal is present than a do-your-best goal, even though it was only marginally [28]. To stimulate contribution in a community, a group goal is more effective than individual goals [28]. Therefore, it is important to have a correct balance of tasks in a gamified solution.

2.8.1 Extrinsic and Intrinsic Motivation

Extrinsic motivation is factors that work as a motivator outside a user. The best way to describe extrinsic motivation is when a person performs a task to receive a reward or to avoid punishment. It can be anything from studying hard to complete a course to competing in a sport to win a prize. Intrinsic motivation, on the other hand, arises from within due to the want to receive personal rewards like satisfaction and challenging. The difference is if the motivation comes from outside the user, or from within. Intrinsic motivation and intrinsic rewards will engage people on an emotional level and therefore create engagement, like solving a puzzle because the challenge is fun and exciting. In the short run commitment can be bought with extrinsic rewards, but for emotional engagement, the focus needs to be on intrinsic rewards [15]. Gamification can therefore be incorporated to engage users on an intrinsic level [15].

2.8.2 External Reward on Intrinsic Motivation

Research has shown that money, as a reward after completed task, decreases intrinsic motivation whereas verbal reinforcement and positive feedback can increase it [40,
p. 114]. An example of this can be found in a service called Mahalo.com that was launched in 2007 [41, p. 118]. The site offered a question and answer platform but a new addition to the business model was a monetary reward for the users questions and answers that could be exchanged for real money [41, p. 117]. After some years, and after the launch of Quora, Mahalo started to lose users, and Quora increased their user number. Quora did not offer any money for the questions or answers submitted; they realised that money was not the inner drive for people contributing. This case indicates the importance of knowing what drives the users and in Mahalo’s case, it was not money as they thought. Quora’s social reward did better than Mahalo’s monetary [42].

Deci, Koestner and Ryan [43, 44] did two meta-analyses of previous research on intrinsic motivation and agreed that all rewards, such as tangible rewards, expected rewards, engagement-contingent rewards, completion-contingent rewards, task contingent rewards and performance-contingent rewards decrease intrinsic motivation. Only verbal rewards, depending on the way presented, increased intrinsic motivation. Another point made by the authors is that if a task is perceived as dull or uninteresting for a person, it is not possible to use rewards in any way to increase this, it is the activity that needs to be able to facilitate the importance of the activity.

The theories found have different opinions on how to increase intrinsic motivation and when it work and not. To keep in mind when reading this section is that all research has been conducted in different areas, different time periods and different context but should all be taken into consideration when designing a gamified application.

2.9 The Hook Model

Some of the theories covered so far can be seen in the Hook Model [41], Figure 6. The model visualises a way to describe how users stay within a service depending on motivation, triggers, actions, rewards and investments.
2.9.1 Triggers

The first step that ignites a behaviour is the trigger and occur as an external or internal trigger, depending on both the situation, the user and service. Triggers are the beginning of the Hook Model. Many different types and levels of triggers exist so not all will be in focus in this report. Common for all triggers is that it makes an action occur and happens all the time around us in daily life.

**Internal Triggers** Internal triggers are triggers that come from within a person and can be anything from hunger to joy. When it comes to an application, thought, feeling or situation can trigger the behaviour. Feelings, especially negative ones are powerful triggers. These types of association can take a long time to form, but when a user is hooked, no external triggers are needed, only internal are [41, p. 49-51].

**External Trigger** According to Eyal [41, p. 44], four different types of external triggers can be used to get a user to conduct an action. (1) Paid triggers, (2) earned triggers, (3) relationship triggers and (4) owned triggers. Paid triggers are external triggers such as commercials and are best used to drive new users to a service and brand. Earned triggers are built on the brands and products reputation and work. It can be press mentions or features in the app store and can not be bought directly by the brand [41, p. 45]. Relationship triggers are when a loyal customer group spread the word about the product to other potential customers. The last type, owned triggers, shows up in daily life and in the customer’s environment. It can be the app icon signalling that a new message is received and these types of triggers only exist after the user has approved it. This last trigger will work to remind the user to repeat the task until a habit is formed. [41, p. 47]
2.9.2 Action

After a trigger is ignited, the user’s action will take place. This action is performed because of the user’s expected outcome, the reward. It can simply be seeing a picture after scrolling down on a social media feed or moving to a new page on the web to more elaborate rewards like a small step towards a larger goal. Simple feedback loops are all around us but do not create the repeated behaviour as the Hook Loop does. Just because the light turns on and off when the light switch is pressed, it does not create a behaviour to turn it on and off all the time. When a trigger is successful, an action carried out by the user will follow and can be anything from a small act to a large one. Depending on the type of trigger, different actions are taking place, but also the user’s expected outcome will differ.

2.9.3 Reward

There are three types of variable rewards and are classed as (1) the tribe, (2) the hunt and (3) the self [41, p. 131]. The tribe refers to the social element of belonging, the hunt is the search of material things or information and the last, the self, is the search for intrinsic rewards and mastery, competence and completion [41, p. 132]. In the case of this report, the tribe and the self is of interest.

2.9.4 Investment

The last and final step in the Hook Model is the investment, and it is the step where the user will invest in the task and service. It can be an investment in time, data, knowledge or other but all of them require user engagement. Examples are adding more personal information on a social media page or signing up for a newsletter. When more investment have been made to a service over a period, the user will find it easier to continue to use the service. [41]

2.10 Fogg Behaviour Model

Fogg claims that for a behaviour to happen, motivation, ability and triggers all need to be sufficient [45]. The graph in Figure 7 have two axes, a vertical showing motivation and a horizontal with a scale of ability. The third factor is triggers and will increase the likeliness of behaviour or event to occur. Motivation and ability are both depending on each other, even if a high motivation exists for carrying out a task, does not imply it will happen due to the lack of ability, and vice verse. All three factors are important for a behaviour to occur and can be read through the conceptual equation \( b = ma + t \), behaviour (b), motivation (m), ability (a) and trigger (t).
Fogg continues to break down the three components and starts with motivation. To increase motivation, pleasure and pain act as the first core motivator and the second core motivator is hope and fear. The third and last motivator is social acceptance and reaction which is all about social behaviour. Facebook can be used as an example when it comes to social acceptance, and people seem to be driven to be socially accepted [45]. When Fogg breaks down ability or simplicity, then factors like time, money, physical effort, brain cycles, social deviance and non-routine are all factors that will affect the ability. Finally, three different types of triggers can occur. The first one is a spark to motivate a person to a particular behaviour. The spark needs to be used when people lack motivation. The second trigger is called facilitator and is used when motivation exists, but there is a lack of ability. This is to trigger behaviour and making it easier. Finally, there is a trigger for highly motivated with high ability, signal. A signal is just a simple reminder for the behaviour [45]. These triggers can both be internal and external triggers.

Figure 7: Fogg Behaviour Model (FBM), to illustrate the correlation between trigger, ability and motivation for a behaviour to happen.
3 Theories Used to Define Gamification Elements

Below two different approached to identify gamification design decisions for chosen application are listed.

3.1 First Iteration

To create a meaningful interaction and game thinking application, it is important to identify the business and player goals [15]. The following theories are developed by Burke [15] and the different steps are explained in more details below.

Define the Business Outcome and Success Metrics The first step is to identify the business outcome that can be addressed with gamification and what metrics that can be seen as a success for the company. This is important to be able to identify when success is met and distinguish business and user goals though these can be very different [15].

Define the Target Audience The target audience is vital to understand when designing for the users [15].

Define Player Goals It is important to separate the user goals and business goal when designing the gamified interaction. By doing this, a sweet spot of shared goals can be identified and used in the design. The player goal is what users want to get out of the interactions when using the service [15].

Determine the Player Engagement Model The player engagement model is about how to structure the gamified solution. It describes the player engagement and is the following states; (1) Collaborative/Competitive, (2) Intrinsic/Extrinsic, (3) Multiplayer/Solitary, (4) Campaign/Endless and (5) Emergent/Scripted. All these is based on the user’s motivation and engagement when deciding [15].

Define the Play Space and Plan the Journey The play space is where the interaction and game take place and can be virtual, contextual or a combination of both, for example when using the phone’s GPS for distance or position. The play journey, on the other hand, is about the journey on a larger scale, all the way from onboarding, through many engagement loops to a mastering level [15].

Define the Game Economy All reward programs, games and gamified solutions have a game economy present in the design. It can be Fun, Things, Self-esteem
and Social Capital. The last two are the important ones to include when developing a gamified solution; self-esteem because the user wants to progress and feel good about oneself and social capital is when other people within a closer group recognise one’s achievements [15]. Another important aspect to keep in mind is the social aspect and the need to connect people. Many popular apps have integrated a social network and are, just like a gamified solution a way to engage users on an emotional level.

3.2 Second Iteration

To iterate the identified gamified elements and design in Klarity, an approach according to Anderson [3, p. 183-189] was carried out during an ideation session.

**Behaviour Pattern to Encourage or Discourage** This is to identify what user behaviours that should be encouraged and discouraged.

**Behaviour Into Data That Can be Tracked and Measured** This step includes to see if the behaviour list identified in previous step can be translated into data that can be tracked by the system. It can both be an easy task, like counting, but also harder when it comes to measure qualitative behaviour.

**Attach Points** When the behaviours to encourage have been identified as well as how to track this behaviour, the next step it to recognise them by adding or deducting point. This will create the base of a point system.

**Period Scores** Simple point can over time lose its effect and therefore it is interesting to use the points in different ways. One way is to show the scores after a period, both to give the user an indication of how they are doing, but also compare to others and themselves. There is no real limitations in how this can be done, but important is to keep it interesting and worthwhile to the user.

**Display the Score in a Fun Way** Interesting data can be collected in an easy way but it is important to remember that humans are emotional beings. Therefore it might be beneficial to present the information in an other way that just as a number.

**Create Rules to Translate Data Into Helpful Information** Scores and how they are represented is useful to some extend and more interestingly, how these can be represented as useful personalised tips.

**Set Challenge** It is a powerful motivator to have the user to compete with themselves. This is the theory of having a status that can increase or decrease depending on user behaviour. A higher status will mean a higher mastery for chosen task.

**Social Cues** Even though competing against themselves is a great motivator, social cues are even more powerful. It is always of interest to know how a user is doing compared to others.
4 Method

The method used as an inspiration when carrying out the work during this report was the Double Diamond theory [16]. The double diamond is divided into four broad parts: Discover, Define, Develop and Deliver. The four sections include discovering and gathering insight, define an idea based on the insight, create, test and iterate a concept and finally, deliver the final product and result, see Figure 8.

![Double diamond visualisation](image)

**Figure 8:** Double diamond visualisation with the four steps; discover, define, develop and deliver.

4.1 Literature Study

The first part of this thesis includes a broad literature review of previous research conducted within the field of user experience, interaction design, psychology, behavioural theories and gamification. This information was collected from articles, books, blogs and websites to get a broad understanding of the topic. The reviewed research was gathered from Google Scholar\(^1\).

\(^1\)www.scholar.google.com
4.2 Interview Klarity

Time was put aside to understand Klarity as a business, their product, users and their future goals. This knowledge was collected both by being around the Klarity team during daily meetings in the first period of the project but also through an interview with Klarity’s product owner Carolina Clemensson. The interview followed a semi-structured design [46, p. 24] to create a conversation about Klarity and gather information needed to continue the ideation and design of a gamified Klarity prototype. The interview questions can be found in Appendix A. The result from the interview was used as a base when design ideas were created.

4.3 First Gamification Iteration

To see any patterns and to get a better overview of found theories to be used and implemented in the design, time was put aside to sort and categorise the theories. This work was carried out by writing all important aspects from the theory section on post-its, to be able to sort these into groups.

After collecting insight from previous research, theories and Klarity, a first attempt to define the different gamified elements suitable for the civic engagement application Klarity, according to Burke [15] was carried out. This attempt was made during an ideation session. This sorting and categorising were done by using post-its. Six columns were created; (1) Define the business outcome and success metrics, (2) Define the target audience, (3) Define player goals, (4) Determine the player engagement model, (5) Define the play space and plan the journey, (6) Define the game economy. Under each blue post-it, all possible information or choices, depending on previous research was added. By looking at the current Klarity prototype, and the different ideas on the post-it below each heading, suitable ideas was chosen to take further to investigate.

As a step of iterating the gamification ideas from the first ideation session, a second session was carried out to identify the different game element more in details and how it should work, but with the gathered design choices as a starting point.

4.4 Competitive Review

Two different applications and one website were reviewed [47] to get an understanding in how other successful applications within similar areas are using gamification to motivate user contribution. The aim of the competitive review was to collect concrete ideas and see if the chosen services had used any of the gamification design steps stated by Burke [15].
4.5 Second Gamification Iteration

An approach according to Anderson [3, p. 183-189] was taken as inspiration when the second ideation session was carried out to iterate the identified gamified elements and design in Klarity. Similar approach as during the first iteration was done, but also with more gathered insight from the competitive review. This second session was an attempt to merge all collected information and boil it down to actual design elements to apply in the Klarity application.

4.6 Prototype Design

Klarity were, at the time of this thesis, developing and refining their prototype as a step towards their real product. To keep the tests and results more valid, the prototypes in this report was an extended version of the existing Klarity product. By doing this, the focus could stay on the gamified journeys and not on the design of the whole application. With the support of the gamified elements ideated during the two ideation sessions, a lo-fi prototype were created with rapid paper prototyping [48].

Parallel to the lo-fi prototyping, a hi-fi design was build using Sketch\(^2\) and inVision\(^3\) to create a simple interactive prototype to use during usability tests for evaluation.

4.7 Usability Tests

Before the first usability test could be carried out two pilot tests was conducted to reassure the concept, the script and the technology used was working as expected. These tests function was to ensure that the flow in the prototype worked and tested the variables this report was focusing on. The test did make sure that Lookback\(^4\) was possible to use during the test session carried out on distance and a step by step manual for the test user was written, so the connection to the call was made easy, see Appendix B.

The usability tests were carried out in different ways due to the test persons location. One test was held over Lookback\(^6\) and the rest were done in person. The tests were all constructed in the same way and started with questions to identify the test person’s background and previous contact with corruption and injustice, but also the thought of the topic (see Appendix C). These questions were also an attempt to be able to see indications of which personas the user could be identified with. The first part was designed as a semi-structured interview [46, p. 24] to leave room for feelings, thoughts, differences and more due to the test persons different backgrounds. The second part of the test included a few scenarios to navigate through the application (see Appendix D).

After the interview and scenario, a questionnaire was handed to the test person

\(^2\)Sketch https://www.sketchapp.com/  
\(^3\)inVision https://www.invisionapp.com/  
\(^4\)Lookback https://lookback.io/
including 14 questions from the Intrinsic Motivation Inventory (IMI), all trying to identify intrinsic motivation. The two sections chosen from the full IMI scale included questions regarding motivation/enjoyment and usefulness/value. The first part was an attempt so measure the level of motivation and the second part was a way to see if the person did see any value in the application and from there draw conclusions. The test person did answer these on a seven-item Likert scale ranging from ‘Not at all’ to ‘Very true’. The Likert scale was based on the full IMI standard. The questions from the two sections of the IMI questionnaire was randomly ordered to avoid similar questions next to each other. In total, 14 of 45 of the questions was used due to the relevancy and recommendation to only relevant questions depending on the area to measure.

One test was carried out via Lookback, one test at Antrops office in Stockholm and six test at SFI\(^5\) in Umeå, Sweden. Five test people were given a Trisslott\(^6\) as an appreciation for contributing.

Seven out of eight usability test was captured with screen recording to be able to analyse the test after the session and have the possibility to look at it more than once if needed. The usability tests was summarised one by one, and a mean score of the IMI calculated. In the discussion, a reflection over the result was presented together with guidelines, and finally, a conclusion.

\(^5\)Swedish for immigrants, Komvux Umeå Kommun
\(^6\)Svenska spel [https://www.svenskaspel.se/triss](https://www.svenskaspel.se/triss)
5 Competitive Review

A review of the mobile apps Google Local Guides\(^1\) and Headspace\(^2\) have been evaluated and analysed to understand the use of gamified design in the user experience. Also, the website Change.org\(^3\) was included in the competitive review due to its focus on getting people conduct everyday activism. These applications were chosen due to their implementation of gamification, but also because of what they are offering the user. Google Local Guide is an app where users collaboratively are creating the content for places around the world that other can use when visiting new areas or looking for a particular place to go to. For Google as a business, it is a way to get users to add huge amounts of data into their services. Headspace is a health app that is focusing on the single user’s well-being, and their mission is to improve the health and happiness of the world\(^4\). The site Change.org has been analysed due to the aim of the site and can be compared to Klarity. The competitive review carried out has been done in line with recommendations from Nielsen Norman Group [47] and is a way to identify both positive and negative aspects and designs that can be used for the development of the design used in this report. The focus was mostly the implementation of gamification and how this might motivate users.

5.1 Google Local

Google Local Guides is a global community of people sharing discoveries and adding reviews on Google maps. The user can find places in a town and use the service as a guide. The community itself can unlock different benefits and incentives along the way as well as get to know people with a similar interest through the Local meetups hosted around the world [49]. Google Local supports users to collect points and improve ranking as they are adding information. The incentive is done by adding card visible on the front page where the user can decide what step to take next. Examples of this can be the low-level engagement where the user can answer easy yes/no questions for places they have visited. This type of question is a simple way to engage both new and existing user to add information. By giving the options of small steps the users gradually build trust and engagement for the activity. The service is targeting people that want to help to add information and reviews to Google Maps. Google Local is targeting the users with a text and tone that reinforces the need of working collectable. Outside the platform, activities like user events are hosted to get people together in real life. Also, when reaching higher levels, the user will be

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1 Google Local Guides https://www.google.com/local/guides/
2 Headspace https://www.headspace.com/
3 Change.org https://www.change.org
4 Headspace https://www.headspace.com/join-us
included in a group of testers to see and use new Google products before everyone else. The web page is more complex than the mobile application, and it is easy to see what is required from the user to advance to the next level. These levels are indicated both by points but also with specific tasks.

The point system starts on a low level which makes it easy for a new user to advance quickly, feel good and inspired to do more. Level two is a lot harder to complete. False information or pictures added will be removed together with the earned points, so there is no incentive to try to cheat the system. This is due to the vast amount of users controlling different small pieces of information over time. The application is clearly displaying what is required to advance and is listing it in an easy way. There is a large focus on points and levels present in this application. The gamification used is well thought of, and different levels are unlocking new rewards and incentives to keep working towards.

Important to distinguish is the differences in user goals and business goals in Google Local and can only be assumed without any Google business plans present for this report. Google are striving to get users to review, add and contribute to businesses and other on Google Maps. This has been wrapped into a fun and inspiring way for a user to take part in due to the gamified solution, all according to Burke [15].

**Figure 9:** Screen shot Google Local

### 5.2 Headspace - meditation

Headspace\(^5\) is an application offering easy to use guided meditation sessions and has been included in this review due to the design, but also due to the need of user motivation to keep using the service. The user can unlock more levels the more it is used, and it is a way to advance as a user. The application has a friendly and calm feel, both from colour palette but also from the illustrations and voice. Headspace offers two different levels of use, one trial version providing a shorter series of 10 minutes guides meditation session, to a full subscription with more meditation series to unlock as the usage moves forward. This unlocking feature makes it clear

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\(^5\)Headspace [https://www.headspace.com/](https://www.headspace.com/)
the user can move to a higher level, even though it is not expressed explicitly. One other key feature setting these two stages apart is the displayed gamification. As a trial user, the information showing on the progress page includes key numbers, badges and streak, see Figure 10. As the user starts a subscription, the progress page expands, and more data about the usage is displayed. This part indicated the status in the different meditation packs available and are a form of badges with progression indicator. The application also offers single one off sessions, and these are counted and displayed. By displaying more information and gamification in the subscribed version might be an indication that these design features have a positive effect on the users. A less positive aspect with all these numbers and badges presented is that it might look a bit daunting or intimidating when just starting to use the service. The primary focus, when looking at the different targets visualised, is to complete as many as possible to be the best user. Overall, it looks like Headspace has incorporated the gamification in a seamless way and as a way to get the user to meditate more. It is also possible to set a reminder daily to be sure the meditation session is not missed, as a owned trigger [41]. Socially the application offers a function where users can invite friends to share the experience with, which is beneficial for the user motivation [3].

Figure 10: Screen shot Headspace

5.3 Change.org

Change.org\(^6\) is a site for people to both start and support different petitions to create changes in the world. A user can start a petition, describe why it is needed, who will receive the names collected and finally, set a deadline to try to reach the target of signed names. The site inspires people to everyday activism, both from the heading, the image or video and the rich description of why the particular petition is needed. It is easy for the user to understand who the recipient for the petition is. The petition also includes graphical elements displaying how close to the target the

\(^6\)Change.org http://www.change.org
petition is, and research supports [50] that this way of featuring a target is a way to get people to work harder to reach the goal, see Figure 11. Additionally, a clear indication of the number of supporters engaged is present on the page. The site offers a login before it is possible to sign a story featured and the user can choose if he or she wants to be anonymous or not. The signing in guarantees valid signatures to the petitions. Other function present includes social share. The site does not use any explicit gamification as the two previous reviewed applications but is still interested due to the sites goal. Change.org can be compared to Klarity in the way that the users are helping other people out done from an altruistic point of view with everyday activism.

Figure 11: Screen shot Change.org
6 Result

In this chapter all results gathered during the process will be presented, from first interview and ideation to final usability tests.

An interview was held with Carolina Clemensson, product owner at Klarity, to identify the current findings they have regarding their potential users. To this point, Klarity has identified three typical users and have presented these as personas. Other information about their future users, questions regarding their business plan were collected. The result can be read in section 6.2 below.

6.1 First Gamification Iteration

The first ideation session to identify the base for the gamification applicable to the impact tech platform Klarity was conducted according to Burke [15] and are presented below. The sorting with Post-it’s can be seen in Figure 12.
Business Outcome and Success Metrics Klarity is a non-profit organisation and can be classed as a social entrepreneur. With that in mind, the company is not striving to make a profit. Instead, the main business goal is within ten years to be a global platform where corruption and social injustice can be discussed, brought to the surface and as a consequence reduce corruption in the world. Klarity wants to see users create cases, add videos and information to the platform.

Target Group The first persona is called the frustrated victim of corruption with the name Richard, a person that frequently meet corruption daily but
does not have the resources to act upon corruption as it is now. This user does not know much about corruption and where to search for help in this matter. The user also wants to have justice and avoid anxiety. Another driving factor is being accepted by society. Key drivers for this user is a good education for his children and a want to expose corrupt people. This user does not have much money so not having to pay bribes is a big part of why he wants to stop corruption.

The second persona is a highly educated person called the social click activist and is named Benjamina. She has a high education and feels frustrated about society. She wants to see a change but does not know how engaged she wants to be. The social click activist would like to see a change in society and wants to influence others to be part of this movement. Both politics and corruption is frequently discussed among friends and family and they all know something needs to be done. She understands that together corruption can be eliminated and it can be done collectively as a society.

The third and last persona is the engaged activist that either works with societal issues, journalism, law or is studying related fields. His name is Anas Junior. This user has a deep understanding of corruption and the system around it. He wants to be a change maker and wants to spread information that does not get forgotten. He has a very strong drive to change society and influence others. He wants to expose a corrupt system.

The typical user is a student living in a large city in Ghana or Kenya and is between 18-35 years old. They belong to a younger generation that has an idealistic belief and are certain that their generation can change the corrupt society together. Anonymity is very important to be able to bring corruption and faults in society to the surface. All users have different desires and want different outcomes from using Klarity. Some know that it is the system that is broken, some just want to get justice in specific cases. Important for all user is that they want to know what is going to happen with a submitted case and how an impact will be made from that. At the moment some users feel stuck in knowing how to fight corruption and are missing channels for this. Common for the users is that they want to know their action are making a difference. They want to stop paying bribes and also, they want to influence others on a social level. They have a strong desire to influence others and want to feel safe while doing so. An acceptance from the society is a bonus. Further, they have a frustration around the current social and democratic situation but think it is possible to solve thing within a reasonable time. To have a channel that can be there for all steps and to get the help of others is important.

All facts around the personas and users come from Carolina Clemensson[51] and Patrik Jacobsson.

**Player Goals** The player goals identified from the interview is a strong desire to influence others. The users want to shed light on a corrupt systems. They want to be heard and know that their case does not get forgotten about. The people and systems subjecting citizens for corruption should be exposed, and the users want to know that their action leads to changes. Also, this type of action can not be achieved on their own, so the social element is important,
they want to know there is support from other people, but still, anonymity is very important. All these actions should be made as easy as possible for the user. Otherwise, they will go somewhere else.

**Player Engagement Model** The engagement models below can be seen as a starting point and indications of how the gamification should be developed and created for Klarity as a first iteration.

**Figure 13:** All player engagement models

Based on the application topic, the found theories listed in the Theory section and the personas; it is clear that the gamified Klarity will be of a more collaborative structure than a competitive [23, 51]. The competitiveness might still exist, but then in a “we against them” approach.

Due to facts about motivation and gamification, the challenge, in this case, is how to motivate the user intrinsically and therefore, the goal is to try to increase the intrinsic motivation among the users. Users that only get motivated extrinsically will not contribute with valuable information to the platform. Even though intrinsic motivation is the focus, extrinsic motivators will exist to trigger the wanted user behaviour.

Group dynamic, goals and social aspect are important and based on theories found in previous research and persona goals [51, 28, 39]. A mix between a solitary and multiplayer playspace will, therefore, be created for this prototype.

The long-term goal is to have an endless gameplay to be able to motivate the users over a longer period.

Other important factors to the engagement model are that a winner should not exist, everyone is helping each other out to create a better world. It is all about collaboration even though there are elements of selfish rewards. More importantly is to stimulate crowdsourcing and to be able to intrinsically motivate the users, not just externally as easily might happen when adding different types of rewards and recognition.

**Play Space and Plan the Journey** Due to the importance of anonymity, the play space will only exist virtually. It might be too dangerous to show user location or facts that can identify a person. But with that said, the location
can be used to identify cases in the near surrounding to be able to help other users on relevant cases to create a smaller step for the user to feel that they can contribute.

The play journey is outside this thesis, but an important factor is to make the journey last for a long time and always evolving. In this report, the focus will, therefore, be on the first time use, especially when testing.

**Game Economy** Social capital and self-esteem are two important factors most commonly used in gamified solutions [15, p. 107]. Self-esteem does come from Dan Pink’s theory about autonomy, mastery and purpose and is the primary intrinsic motivators [38]. To build a player’s self-esteem up the gamified solution should provide challenges, feedback, praise, levelling up and access. Social capital is when a user’s social circle recognise their achievements. This application will include a social factor, but still with anonymity. A function to share cases on social media will also exist. Other game economy factors to include is leadership, praise, badges, groups and likes.

### 6.2 Second Gamification Iteration

Below the result from the second ideation session is presented with steps from Anderson [3]. This session was carried out to have more depth and validity behind the decisions taken for the gamified elements.

**Identify Specific Behaviour Pattern to Encourage or Discourage** These behaviours listed can be encouraged and discouraged with the help of gamification. **Encourage** that a user uploads a video and adding a new story. Also, encourage users to add documents and video to other, already existing cases on the platform. Encourage the user to take actions outside the platform and finally, focus on the core value; exposing corruption and injustice. **Discourage** user to just look around on the site or adding false information. Discourage the name and shame of a person and finally, discourage a user to just focus on collecting points, not the core value goals.

**Translate Behaviour Pattern Into Data That Can be Tracked and Measured**

When cases and information are added to the platform, it can easily be counted separately. The same goes for adding information to an already existing case. Challenges can be created to encourage a user to add information, and these challenges can be recognised and valued when completed. Finally, clearly display how the user is making a difference by contributing to the platform, for example, how many citizens that are helped by engaging in stopping a case. This can create empathy and are positive according to Weinschenk [37, p. 168].

**Attach Points** Below is a list of the different scores and points discovered to suit Klarity. These scores are based on the competitive review, users and other collected information. The scores are compared to the task conducted. A larger task and challenge will give the user more points but should also reflect the skill [3]. Inspiration has been taken from the competitive review of Google Locals. It should be possible to know why a certain point is given for an action.
taken and no unclear surprises occurs. In Table 1 the scores for uploading a case is presented, and the point for adding more information in the service is displayed in Table 2.

**Table 1**: Points given when uploading a story

<table>
<thead>
<tr>
<th>Upload video/story</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Only a video</td>
<td>20 pts</td>
</tr>
<tr>
<td>Only one text field (Location or organisation)</td>
<td>5 pts</td>
</tr>
<tr>
<td>Name of person</td>
<td>10 pts</td>
</tr>
<tr>
<td>Description</td>
<td>10 pts</td>
</tr>
<tr>
<td>All fields, a full story</td>
<td>50 pts</td>
</tr>
</tbody>
</table>

**Table 2**: Points given when using the application

<table>
<thead>
<tr>
<th>Add information to already existing story</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to answer cards on story page</td>
<td>1 point each</td>
</tr>
<tr>
<td>Only a video</td>
<td>20 pts</td>
</tr>
<tr>
<td>Only one text field (Location or organisation)</td>
<td>5 points each</td>
</tr>
<tr>
<td>Name of person</td>
<td>10 pts</td>
</tr>
<tr>
<td>Description</td>
<td>10 pts</td>
</tr>
</tbody>
</table>

When a person is only looking on the site it is important to inspire them with a trigger to get the user to take a step by trying to add information. Due to the altruistic behaviour, it can be a good idea to include gifts from others. It is a strong motivator to receive a gift from someone else and pulls the user back into the game again [52]. This leads on to the fact about how important recognition and social capital is [15, p. 108].

**Period Scores** Easy points are trivial but can be displayed in a larger picture to motivate the user to engage better next period and to try to compete with themselves. Another way to motivate users is to inspire users to always be better and competing against themselves. This type of periodic summery can both be added direct to the Klarity platform, but also, it can be part of a monthly review or similar to reinforce usage on a regular basis.

- Show the user how they did this period, compared to last one
- Show in what segment the user is, for example in the top 4%
- Send detailed report as an email and also indicate trends to encourage the want to be better next time
- Average scores or statistics
- Amount of reviewed cases and activity
- Number of affected and helped people. Try to add the giving/helping feeling
- Number of solved cases the user has been involved in
Display the Score in a Fun Way When displaying scores in a fun way, the motivation can be affected due to graphical elements, the surprise and the aesthetic. The number of helped or effected citizens thanks to the user’s engagement can be one fun and different way to show what difference the user is making. Further, show the number of solved cases the user have been part of.

Set Challenge Get users to compete with themselves, and in that way, create a want to reach the next level or status. It can be beneficial to indicate if cases in the current location need help and how many helpers are needed. When a person is getting closer to the finish line, they will work harder [39, p. 36], so a good way to promote usage is to include a progress bar. This type of progress bar can also be found in all platforms reviewed. A challenge will be created as an incentive to reach the next level. With these challenges and levels, the user can unlock features along the way to always have a feeling of progress and reaching for something new.

Social Cues What drives online behaviour is social capital, not economic capital [3, p. 188]. A good way to apply social capital can be to compare a user’s statistics with other users. People want to know how they are doing compared to other people and see how active other people are. This should be done in a subtle way to make sure it does not create any negative effects. [2]. Also, see how many that have contributed with information to the case to inspire more actions and contributions from more people and to see the number of followers for a case.

6.3 Prototype Design

The lo-fi prototype was created during a rapid prototyping session with Klarity’s existing application as a starting point. Here the exploration of adding game elements discovered during the ideation session to Klarity was done, see Figure 14. Small changes on almost all existing pages were done, but some new features and pages were added to create a better flow to the scenarios tested. This step was iterated before a final prototype was created. Not all ideas discovered in the gamification ideation sessions was implemented in the prototype and had mostly to do with the depth of prototype and the scenario the user would go through.
6.3.1 Hi-fi Prototype

The lo-fi design (Figure 14) was later transferred and developed in Sketch\(^1\) and inVision\(^2\) to create a feeling of a fully functional application that could be used during usability tests. The graphic design used was inspired by Klarity’s current UI kit to keep it correlating to the brand. An overview of the different screens created for the usability test can be seen in Figure 15 and 16.

\(^1\)Sketch, [https://www.sketchapp.com/](https://www.sketchapp.com/)
\(^2\)inVision, [https://www.invisionapp.com/](https://www.invisionapp.com/)
Figure 15: Upload scenario displayed. Green dotted square indicated added gamification.

Figure 16: Screenshots from gamified Klarity prototype. Green dotted square indicated added gamification.
6.4 Usability Tests

In total eight usability tests were conducted and of these eight, seven could be used to evaluate the prototype. One test turned out to be an interview, and some findings from that interview will be listed below. All eight people were born in and grew up in another country than Sweden. Universal for seven out of eight testers was the previous experience of corruption from their country of origin, and therefore a good understanding of the problem and aim Klarity is trying to target. They came from France, Germany, Iran, Syria, Ghana, Nepal, The Netherlands and Uganda and all with in the age range 31 to 40 years old, two female and six male. The recruitment was made from contact with the Ghana Union, colleagues at Antrop and Swedish for Immigrants (SFI) in Umeå. All test persons lived in Sweden, one in Stockholm, one in Gothenburg and six in Umeå and had been in Sweden for six months to eight years, an average of 2 years and eight months. All tests took under one hour and all, except for one, was recorded, due to a technical problem.

All test people did keep in contact with news from their home country, but it varied from friends on social media to actively seeking articles on local news sites and comparing sources. Two people expressed they were using messenger apps to discuss and follow the news (Whatsapp and Telegram). Everyone said they use the internet as a source to find news.

Half of the test persons had experienced corruption up close. Two people had not experienced it themselves, but close friends or family members had. One did talk more about corruption on a higher level within politics, and one test person had never seen or experienced any petty corruption.

To fight corruption and social injustice, half of the people said they think stricter rules need to exist, i.e., it needs to come from the top. Two people with experience of corruption claimed that transparency was the most effective way. One thought education is the only way forwards.

When the usability tests started, everyone had difficulties with the interaction of the application. After navigating around a while, it became clearer, but some small interaction issues followed through the whole test. In the first scenario the test person was given the facts that they had experienced and recorded a corrupt case and had heard about Klarity. They wanted to get help to stop this happening again. The uploading steps worked well for everyone, and after upload, they all received a reward that thanked them for uploading their first case, but also saying how many affected people that can be helped by using Klarity (Figure 17a). No one made a comment about this page, even though some read it all very carefully. As a next step, the user was told they have information about other cases existing on Klarity and should try to help out. When the user finally entered a story page, three users expressed positive comment about the text stating how many that was supporting the case. One said it gives a feeling of not being alone (Figure 17b). The seven test users sometimes had difficulties understanding how to add information to a case, but when they did, they answered the question cards displayed under the video. When three questions were answered, they received an image and text as a recognition for helping out (Figure 17c). The comments here were few. Only one user said it was negative and did not do anything for him and one did, from the sound the user
First reward after uploaded case

Case page including supporters

Reward after adding info

(a) First reward after uploaded case  (b) Case page including supporters  (c) Reward after adding info

Figure 17: Screenshots of different elements tested

made, possibly experience as positive or as a surprise. One person was very clear throughout the usability test that the lack of social elements was missing. One other user navigated back to My Cases (Figure 18a) and was very positive to the numbers and progress bar related to the case.

The next scenario given was to find the person behind the uploaded case and the profile page (Figure 18b). After entering the site, different opinions was registered. Five test persons said that it was good and relevant information, even though at least one of them did not read more than only the first few lines. Only one was direct negative to the information displayed. One was clear with the dislike of gamification in this application. Further, even though some expressed that the information was good, three also said it might be too much irrelevant information. They were not sure if everything was needed to be displayed about other users and said it might be enough to include this information on the own profile page. Overall, three persons said the information presented was good.

The next step was to look at the user’s profile page, and similar comments were registered here. Three people were positive to the information and one negative, one did not like the gamification, but one did. Overall, two people believed it was too much information. Also, it was clear that the users did not read the whole page with all information and therefore, the badges at the bottom were mostly missed or ignored (Figure 18c). Only one person said something about the badges, and it showed that the person did not understand it. Overall, four people said that the information and levels displayed would motivate them to do more and use Klarity more; only one said it would not make any difference and that the important factor was the interaction, not what it looks like.

When it came to the displayed levels (Figure 18b), both for other users and themselves, one person did say 'This guy is good. Level 12, good for him' and believed this was a person who wanted corruption out. When he later looked at his level and progress, the user said that he have to do more, similar comment to another test person. The next user did straight away register that he could advance by filling up
the progress bar with points and believed it might motivate him to use the site, and similar. A third user did say the profile page would not do anything for him, and if he feels like helping out, he will do so regardless.

6.4.1 IMI Questionnaire

The IMI questionnaire was handed to the test person after a conducted usability test as an attempt to measure intrinsic motivation after using the application. All questions and raw data can be found in Appendix F. The scales show an indication of the overall usage and it is not possible to take out only the gamified parts from the application. These gamified elements are part of the full prototype tested, and therefore, the result of the questionnaire should reflect that.

The questionnaire was divided into two Likert scales, the first one measuring interest and enjoyment and was made up of 7 questions. The second one measured value and usefulness and had four Likert questions and three open-ended questions. The scale ranged from 1 = not at all true, to 7 = very true. The scale was analysed according to practice [53]. The reversed questions (R) score was first deducted from 8.0 before the mean score was calculated. Two users answered the question through Google forms and five answered them on paper.
Interest and Enjoyment

In total, the questionnaire received seven answers after the usability test, and the mean answer on the first subscale measuring interest and enjoyment came to 5.2 (Table 3), where 1 = not at all true and 7 = very true. Mean scores for the individual Likert questions of the subscale can be found in Table 4. The mean score has been used as a measurement due to the fact that no massive deviation occurred in the Likert scale answers, see Appendix F.

Table 3: Average mean score on full sub part of Likert scale measuring Interest/Enjoyment

| Likert scale means score | 5.2 |

Table 4: Likert scale measuring user intrinsic motivation through interest and enjoyment

<table>
<thead>
<tr>
<th>Likert item questions</th>
<th>Mean answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed using this app very much</td>
<td>5.14</td>
</tr>
<tr>
<td>This app was fun to use</td>
<td>5.14</td>
</tr>
<tr>
<td>I thought this was a boring app (R)</td>
<td>6.57 (When reversed)</td>
</tr>
<tr>
<td>This app did not hold my attention at all (R)</td>
<td>5.86 (When reversed)</td>
</tr>
<tr>
<td>I would describe this app as very interesting</td>
<td>5.71</td>
</tr>
<tr>
<td>I thought this app was quite enjoyable</td>
<td>4.86</td>
</tr>
<tr>
<td>While I was using this app, I was thinking about how much I enjoyed it</td>
<td>3.14</td>
</tr>
</tbody>
</table>

Value and Usefulness

In the second part of the IMI, usefulness and value was measured. Four questions was Likert questions and three questions was constructed so that the user would fill out the open ending question. The overall mean score for the four Likert questions came to 5.36 (see Table 5.) Individual mean scores for each questions can be found in Table 6.

Table 5: Average mean score on full sub part of Likert scale measuring usefulness and value

| Likert scale means score | 5.36 |

40
Table 6: Likert scale measuring value and usefulness to the user

<table>
<thead>
<tr>
<th>Likert item questions</th>
<th>Mean answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe this app could be of some value to me</td>
<td>5.0</td>
</tr>
<tr>
<td>I think that using this app is useful for...</td>
<td>-</td>
</tr>
<tr>
<td>I think this app is important to use because it can...</td>
<td>-</td>
</tr>
<tr>
<td>I would be willing to use this app again because it has some value to me</td>
<td>5.14</td>
</tr>
<tr>
<td>I think using this app could help me to...</td>
<td>-</td>
</tr>
<tr>
<td>I believe using this app could be beneficial to me</td>
<td>5.14</td>
</tr>
<tr>
<td>I think this is an important app</td>
<td>6.14</td>
</tr>
</tbody>
</table>

All individual answers can be found in graphs generated by google Forms in Appendix F.
7 Discussion

This report and its results is an attempt to identify and see indications if gamification can have a positive or negative effect on intrinsic motivation to a user acting out of altruism in an impact tech solution. The design proposal was developed by existing guidelines and knowledge from Klarity as a valid starting point for this investigation. The fact that Klarity does not exist as a product at the moment, and therefore lacking users or established focus groups, a big challenge has been to identify and find relevant test persons for the usability tests carried out to keep the gathered data valid.

The triggers that have been investigated as an attempt to create motivation in an altruistic community are gamified elements in Klarity’s application. The research question stated was if gamification can be used to increase intrinsic motivation in an impact tech application. A discussion, followed by recommended guidelines will be presented in this section to answer this of the report.

7.1 Users

One goal of this report was to have continuous contact with real users to conduct both workshops for ideation sessions and more extensive user research. Klarity have groups in Ghana helping them with the design and development of this platform but due to difficulties contacting them, and Klarity’s own need of this group and people, other people had to be found for this report. This recruitment took up a lot more time than expected which affected the whole process and postponed the user tests and analysis of the result. If more time was available, it might have been beneficial to compare two different designs or to test an iterated design a second time, to get results that could be compared to each other. However, the people taking part in the usability test had all experienced corruption or social injustice from their home countries, and therefore fit the personas on some criteria. During the project, it was important to find these people and not just settle with native Swedish born subjects lacking the understanding of what corruption is. It the later case, it would have taken focus from the user experience to the topic and non-existing knowledge about social injustice.

7.2 Usability Test

The overall summary of the usability test is that some test persons did like the gamification added to Klarity, while other did not, and this was expressed and interpreted in different ways. These opinions are in line with the previous fact about
gamification and that varying factors motivate different users [33], and therefore it might be beneficial to offer various types of incentives as an attempt to reach as many users as possible. This could be done by providing both low and high-level gamification with both simple summaries to tell current status to challenges encouraging some users to contribute even more.

When the users navigated through the prototype after given scenarios, no one commented the pages where the reward was displayed after completed task. This lack of comments could be due to many different reasons but might be the fact that it was too early in the scenario and that they did fully understand what type of application they were using and what it all means. With this in mind, it might be beneficial to let a user be familiar with the application before adding or reinforce the user’s behaviour, but at the same time, it needs to be done before the user loose interest and as a way to give the user a short term goal to strive towards. This reinforcement can be compared with the Hook Model [41] and the explanation about creating a loop where users feel like they need and want to keep using the service.

When it came to the information on the profile page, five out of seven expressed positive words regarding the information displayed, and the other two thought the information was more negative than positive. One person was against gamification and two other expressed that it was too much irrelevant information, especially when looking at another user’s profile. The five people that claimed the information was useful did believe so, but when looking at the usability test and their behaviour, it was clear that they did not always read all information displayed, only the first part. It was clearly too much text and should be limited, as Anderson suggestion of presenting the score in a fun way and not only text.

No one said anything positive about the milestones presented, but two gave negative comments about it. There can be many reasons behind this, for example, the lack of understanding of how these work, as they now were displayed even though the test person should be acting like a first time user. This could mean difficulties understanding the use and where they came from. The badges were placed at the bottom of the page under all the text that, after usability tests, was too long, and therefore some user did not look that carefully at the bottom of the page. The design and representation of the badges could also have had a relevant effect and might have been received better if displayed as something related to the topic according to Anderson [3].

When the users looked at their profile page, they liked the information, and two believed it was too much information. One person did not like the gamification at all. Four test person said that the information and levels etc. displayed on the profile page would motivate them to do more. The gamified parts itself is not as prominent and exciting that a user would add information to level up and therefore, a hypothesis can be drawn that the profile page with levels and title can motivate users, at least to some extent.

In the design tested, a few elements stating the outcome and how many people that would be helped by engaging in Klarity was added, but no comments or reactions, except one, was recorded during the usability tests. The one comment that was received was about the number of active users, and according to the test person, it gave a feeling of not being alone. It was exactly that feeling that was sought
for. Reason for the lack of comment could have been the way it was presented and that it might have drowned together with the other info displayed. Another element added was a follow function, like and answer button for comments, the number of supporters for a case and number of followers. These elements was rather discreet, but also well known and common in online communities, and might be the reason why no one did say anything about them.

An indication of positive effects with gamification in a civic engagement application can be drawn after analysing all the usability test. What stood out during the test was the importance of carefully choosing the most valuable data to present to the user. Also, the way everything is displayed makes a difference.

If Klarity is developed as an application available to download and installed on the user’s phone, it is easier to reach the users with owned triggers. It is a step for a user even to download an app, but at the same time, the user can be reached and regularly reinforced with owned triggers. Otherwise, an email is an option to enhance usage and deliver stats over last period, etc.

7.3 IMI

The questionnaire IMI was an attempt to measure intrinsic motivation from the test people. The overall score of the first Likert Scale measuring interest and enjoyment did score high overall with an average of 5.2 out of 7.0. Only three questions did deviate a bit more than the other and were the question ‘I thought this was a boring app’ which scored high when reversed, indicating that it was not a boring app. The second question that deviated in a more negative way was ‘While I was using the app, I was thinking about how much I enjoyed it’. The wording of this question can be discussed but was taken from the IMI with only small adjustments to fit the topic. The average score was 3.14 which is below the neutral value. This score should not be taken too seriously both because of the way the question was asked, but also because some test persons did laugh when reading the question, indicating it might not have been taken seriously. In fact, these questions combined create a Likert scale measuring interest and enjoyment and should be looked at as a whole. Also, no real deviating individual answers were registered except for just the last one regarding how much they enjoyed using the app.

The second part of the IMI tried to measure value and usefulness for the users. This measurement was more a way to see how close to the topic the users were. This, together with the initial interview, indicated if the test person could be a typical Klarity user or not. According to the use of IMI, the three open-ended questions should be filled out by the test leader. In this case, they were left open-ended for the user to fill out. This decision was taken to be able to collect thought about these questions from the users but also because the scale itself was not the primary scale.

To calculate an average score on a Likert scale, at least four questions measuring the same variables need to exist and in this case, minus the open-ended questions, it did. The mean score came out high here as well, 5.36 out of 7.0 and indicated value and usefulness from users. Four people were neutral to the question ‘I believe this app can be of some use to me’ and three answered a higher score. This is most
likely due to the background and previous experience of corruption, but also attitude towards this problem. Similar individual results can be seen on questions 'I would be willing to use this app again because it has some value to me'. The spread out answers indicate that two people did not have any value of this app and five scored high meaning they would have a lot of use of this app. Similar result can be found in 'I believe using this app could be beneficial to me' with the identical score as the previous question.

### 7.4 Motivation

The way motivation was measured was with the help of a previously established questionnaire called intrinsic motivation inventory and gave a clear indication of how the test person felt when using the app. Even though the questions were not explicitly asking about the gamification in the application, the questionnaire is looking at the whole experience, including the gamification. Therefore parallels can be drawn between the design and the answers in the IMI. The intrinsic motivation scored a relatively high score, and more interestingly would have been to compare it with a usability test and score on a Klarity prototype without any gamification. A drive was to keep the questions and scenarios broad as an attempt to capture both user feelings and ideas. However, gamification should be seamlessly integrated into a service and therefore hard to isolate and measure individually.

With that said, it is also important to point out that the interaction in the current prototype designed by Klarity and used as a starting point for this report, have issues when it comes to user experience. This was evident during the usability test and did presumably affect the measurement and the overall interaction and scoring from the test people. All parts in an application have an effect on each other, see Figure 1 again.

There are, as previously stated, many different types of motivation and just as many different ways to try to measure and identify it [36]. The method used in this paper was an established questionnaire previously used in lab environments and is therefore a suitable choice. The score can only give indications of how the user felt at the moment while using the application, but other things that might have affected the score is the situation, the event of trying something new, and similar. The motivation score after real use over a longer period would be interesting to capture, but a working and live application need to be present to be able to collect user data for the analysis.

### 7.5 Guidelines

Seven guidelines have been developed from this report to consider when adding gamification in a civic engagement application. The sections listed below is a summary from usability test and theories covered in this report. Further, these should be seen as areas to keep in mind and test further when designing a gamified solution into a civic engagement platform.
**Show Progression** Display user status and how the user is doing and current status to increase the want to compete with themselves. This can be done with points, levels and progress but kept in a subtle way.

**Recognize the User’s Actions** In line with the first guideline, the user should be given some recognition when conducting a task. By doing this, it can reinforce the user to move on to another task.

**Present Data** Carefully choose the key statistics and information and display it to the users. This is even more important when displaying another users numbers to keep it as relevant as possible and easy to overlook. Do a thorough research to make sure the information showing gives the user something back. Bear in mind that different users are motivated by different things.

**Engage and Inspire the User** The information displayed should be in an engaging and varied format to catch the users attention. The user might stop reading if too much text is present. It can be good to mix text, different sizes of elements and images, as long as they are relevant for the user, to create dynamic and interest.

**Social Capital** Keep social aspects and collaborative indications prominent. The most powerful drive is social capital so do not underestimate it. By creating a group working together, a feeling of collaboration and togetherness can exist and lets the users work together to the same goals. Also, be clear about what effects the user’s action will have on the community as a whole.

**Limit Existing Barriers** Remove barriers and make the step to contribute as small as possible. If the base level criteria of a functional, reliable and usable product are not in place, the gamification will not provide what it is meant to.

**Add Gamification** Do not be afraid to incorporate gamification in a civic engagement application. When designed to benefit the users, it can enhance intrinsic motivation. Important to remember is that gamification should not be used to create motivation, only enhance or stimulate already existing.

### 7.6 Future Work

The research conducted in this report is just the beginning to a larger research area that should be carried out over a longer period. As stated previously in the report, it is difficult to measure motivation, especially over a short period in a test environment. The type of motivation a business most probably striving towards is long term as an indication of intrinsic motivation and real appreciation of the service. Going forward, it would be beneficial to implement different designs to test over a longer period with a lot of real users to collect data on users behaviour, but also, comparing the effect of different choices with both quantitative and qualitative methods. By doing this, it is easier to see correlations between behaviour and design choices and can, therefore, give a better indication on what motivates a user and not. Previous research states both that competition diminishing altruistic behaviour, but
at the same time, other research claims that people want to be the most altruistic and therefore competing to get there.

7.7 Limitations

Gamification is a large area which comes in many different levels and design takes. There is not a one-way implementation to a service. Instead, the research phase needs to be done thoroughly to understand what user behaviours that can or should be gamified. The second limitation is the time limit for this report with no time to iterate and test the design a second time. By collecting mostly qualitative data from a small amount of user, no statistical conclusions can be drawn. The users testing the application in this research was people who fit the personas Klarity has discovered on certain aspects, but not all. Even though the test people all came from other countries than Sweden, they all live Sweden now, and that could make them adjust their view of society. The personas used is an estimation of future users and might, therefore, change when launching the platform. Going forward, research should be done with active Klarity users.

Klarity’s prototype is in an early stage, and this also affected the prototype used in this report. Klarity is in a phase where usability tests will be carried out for the first time and after that, iterated. A decision has been taken to keep the prototype as it is now and then add the elements and the interaction investigated in this report. Due to this, a more complex game journey can not be visualised for this report and focus will be on specific phases. Some pages are created for this thesis, and some details can, therefore, have been designed primarily for the usability tests. Because the Klarity prototype is evolving during this time and no final prototype or flows are decided upon yet, it will change nearer their release.
8 Conclusion

The research question regarding if gamification can be used as a trigger to increase intrinsic motivation in an altruistic community was investigated with the help of a gamified application tested with eight usability tests and IMI questionnaire. These triggers have been tested and researched on users in an altruistic community with experience of everyday corruption. The result is that gamification can, in some cases and for some users, increase motivation, and presumably intrinsic motivation. Different viewpoints were registered during the analysis of the result and landed in, together with theories found, guidelines applicable for a civic engagement platform. The guidelines highlight the importance of knowing the user’s goals, the social aspect, what to keep in mind when adding levels or points but also how it might be displayed in the best way. This investigation is just a beginning and indicates the possibilities for gamification in an altruistic community, the next step will be to look at long term motivation with a live product. Overall, positive reactions of the gamified application were registered during the usability tests and can, therefore, be considered to have a positive effect on users motivation.
References


[37] Susan Weinschenk. 100 things every designer needs to know about people. Pearson Education, 2011.


[51] Carolina Clemenssson. personal communication.


A Interview Questions for Klarity

A.1 Questions to Identify Klarity’s User.

- Beskrivning över den/de typiska användarna:
- Vad är viktigt i en tjänst som Klarity enligt användarna?
- Varför vill användarna ni pratat med använda Klarity?
- Vad driver dem till att vilja använda Klarity?
  - Hjälpa till att sprida korrupta fall?
  - Hjälpa till att hitta bad guys på korrupta fall?
  - Vill själva ha hjälp?
  - Hjälpa andra?
- Vad prioriterar de?
  - Process (att leta fram information/se nått hända)
  - resultat (stoppa korruption/få fast korrupta)?
- Hur viktigt är anonymitet?
- Hur ser användarna på korruption i helhet?
- Hur ser era användare att korruption påverkar samhället?
- Hur vill de arbeta för att minska korruption?
- Hur vanligt är det att sprida korrupta händelser i olika medier i dagsläget?
- Vad använder de i nuläget för att sprida korrupta händelser?
- Vad vill användarna ska hända med fall som visas på Klarity?
- Har de tidigare agerat mot korruption?
- Har de tidigare blivit utsatt för korruption?
- Vad känner de att de kan göra för att stoppa korruption?
- Hur många, uppskattningsvis, arbetar mot korruption så som era användare?
- Har de tidigare engagerat sig i volontärarbete/politiska frågor/för ett bättre samhälle mm?
- Varför valde de att engagera sig?
Ålder
Utbildning
Teknikvana

• Tävlingsinstinkt?
• Gruppkänsla viktig?
• Annat som är viktigt?
• Populära appar i Kenya/Ghana?
• Känslomässigt engagerade, hur?

A.2 Klarity Business Questions

• Mål med Klarity.
• Business outcome, success metrics.
• Definition av Klarity
• Är det någon information om Klarity som ej får finnas med i min rapport?
B Script For Using Lookback

Instructions

1. Download the app Participant for Lookback on itunes or Google Play to your phone.

2. This link will connect to the call, please open the link on your phone at the time of our call https://participate.lookback.io/PbjttS?live

3. Wait for my call through the app Participant for Lookback and then we can take it from there.
C Usability Test Script

The usability test started with a brief presentation of the test leader, Antrop and Klarity. Also, a quick run through of the schedule was presented.

C.1 Pre-test Questions

- Occupation/ work with
- Where do you currently live in Sweden
- Where are you from originally / Where are you from in ....
- How often do you go back to .....?
- Do you follow the current major news from .... ?
  - No: -
  - Yes: What types of news do you follow. (Sport, politics etc)
- Would you ever follow news regarding corruption or social injustice?
  - yes: How do you get your news? (Friends, family, news papers, internet, tv, social media)
  - No: Is there a particular reason why you don’t?
- Do you think there is enough social awareness about corruption in your home country?
- you think it makes any difference if the public are aware of corruption?
- Have you ever seen corruption or social injustice up close?
  - Yes: Can you explain briefly what happened.
  - No: -
- What do you think is the best way of fighting corruption in ...?
A few scenarios were given to the test person during the usability test to guide them through specific pages. The steps below is just an outline and the order were sometimes mixed by the user.

- The user will begin on the Klarity landing page
- Add a story about corruption (pretend that you recorded this and you want help to add information)
- Receive a reward when first case is uploaded
- Browse other cases
- Click in an a case
- Add information about....
- Rewards given
- You are curious about the user behind the case
- You are curious about how you as a user are doing
- How does it feel to see all this?
E Post-test Questions, IMI Questionnaire

- I enjoyed doing this activity very much
- This activity was fun to do.
- I thought this was a boring activity. (R)
- This activity did not hold my attention at all. (R)
- I would describe this activity as very interesting.
- I thought this activity was quite enjoyable.
- While I was doing this activity, I was thinking about how much I enjoyed it.
- I believe this activity could be of some value to me.
- I think that doing this activity is useful for...
- I think this is important to do because it can...
- I would be willing to do this again because it has some value to me.
- I think doing this activity could help me to...
- I believe doing this activity could be beneficial to me.
- I think this is an important activity.
F Post-test Questions, IMI Questionnaire RESULT

**Figure 19:** Question 1-2, age and home country
Figure 20: Question 3 gender. Question 4-5 IMI individual answers
Figure 21: Question 6-8 IMI individual answers
I think this app is important to use because it can

7 svar

- It can solve an old problem with a new instrument
- Help against corruption
- Alert others, create awareness, share your experience
- Help root out corruption and money lost through corruption can be put to better use
- hjälpa människor
- Name, shame, and expose corrupt people
- Increase mutual knowledge and provide a platform for collaboration to fight corruption

This app did not hold my attention at all.

7 svar

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I would be willing to use this app again because it has some value to me.

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Figure 22: Question 9-11 IMI individual answers
I would describe this app as very interesting.

I think using this app could help me to

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<td>I do not need it</td>
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<td>To recognize some people that can be a threat</td>
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</tr>
<tr>
<td>Play a role in bettering my country</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>have a healthy society</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>expose more injustice in society</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>contribute to expose corruption</td>
<td>1</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

I thought this app was quite enjoyable.

Figure 23: Question 12-14 IMI individual answers
Figure 24: Question 15-17 IMI individual answers