# Green Tourism

# Design Computing Studio 3 - Proposal

*Digi*

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# 1 Overview

The project aims to identify the problem space regarding the disadvantages the tourism have influenced the local community and deliver the possible solutions to address the challenge. The motivation of the project is to discover a suitable approach that can eliminate the negative factors that cause the potential threats to the neighbourhood due to tourism, which can be beneficial for the tourist attractions.

The problem space that our team has selected is the negative impacts the tourism industry has brought to the local community in terms of the heritage property deterioration, the resources abuse and the environmental pollution.

Approximately one billion tourists arrive in the world every year, which puts a significant pressure on the natural resources through over-consumption and gradually destroys the environment ("Number of tourist Arrivals," 2020). Furthermore, according to ICOMOS, the endangered world heritages were increasing by year and the frequent causes were social and cultural changes around the property and the lack of properly trained personnel resulting in the loss of integrity ("World Heritage in Danger," 2009).

Based on the papers, it clearly noted the negative influence of the tourism industry as it poses a heavy burden on the environment as well as the reservation of heritage property and the necessity of improving the current circumstances. The project points out the key factors that contribute to the negative results of tourism, thus, the team can develop the appropriate solution to better address the problem accordingly.

The proposal will first identify the problem space and its key aspects that need to be focused in this project, and then introduce our potential solutions as a guide and outline of the project to overcome the problem we have defined in comprehensive aspects. Moreover, forming a concept based on the solutions, and iterate it through a prototype testing to better understand our target audience and to improve the potential solutions. Also, identifying the questions and areas that might need to go deeper in the domain. Then, a team plan is updated based on the feedback. Finally, a team reflection is given at the end of the report which summarizes the direction, goals, and process of the project.

# 2 Feedback on the Previous Report

In this final iteration, based on the feedback of the previous proposal and presentation, a number of things were adjusted and improved. They mainly focused on in-depth research of the background, personas, and prototype explanation.

Firstly, tutors suggested that the research of social media's persuasion in the background needed to go deeper. The reason for that is we only simply analysed why it exists in the Internet and how to address it; however, we did not mention key aspects that relate to social media itself in this domain. For example, why people could feel persuasion in social media, especially for common social media applications such as Facebook and Twitter. Also, the analysis of strategies used by social media applications to enhance or reduce persuasion. So, in this proposal, they were deeply researched in order to obtain extra insights in this domain, and to further improve the solution and the concept.

Moreover, in the previous proposal, the idea of an award system which aims to motivate users to behave properly was proposed. However, the explanation and related background research were not strong enough to support this idea, and a number of key information were missed. For example, what type of award systems is suitable in our domain, what is the best way to implement it in our solution, and why it is a necessary feature in our domain. So, based on these questions, further literature research about this feature was conducted in this proposal, and a number of important insights were obtained, which were amply described in the next section.

Thirdly, persona was another part we needed to mainly improve in this proposal. It was actually added in the previous report based on the feedback of the first iteration, which aims to explore how stakeholders are involved in this project, how they interact with the potential solutions, and additional requirements and needs from the stakeholders. However, these goals were failed to be achieved because the personas we created in the previous report were not typical enough as stakeholders, and the explanation of how they relate to the solution/concept was not detailed enough. So, we could not get important insights from these personas. Based on the feedback, they should be linked back to the resources we obtained in the background research, and add more detail to make them more representative in this domain. More detail can be found in the stakeholder section.

Prototype was the last part needed to be improved in this report. Based on the feedback from tutors, the description and explanation of the prototype lacked detail, and we only simply described the prototype by showing related pictures, which failed to communicate how the insights we got from the research and the solution relate to the prototype. It presented like an individual section in the report rather than as a whole part. So, in this proposal, it was improved by adding more detail into it. For example, why the interface of the prototype was created in that way, how each feature links back to the background research, and the interaction plan of each feature. The improved prototype description can be found in the prototype section.

# 3  Background

A background research of the impacts of tourism on the local community in terms of environment and local resources will be conducted in this section. The questions identified in the previous report will be answered, and they will be combined with the research we conducted before, which is an extension and a deeper view of the problem space. Then, updated potential solutions will be given as an outline and guide of this project.

## 3.1 Problem Space Overview & Focus

With the development of tourism and economy, the number of tourists is gradually increasing. Our World in Data (2019) reports that the total number of international tourists was 682 million in 2000, and it reached 1.4 billion in 2018. Although it brings tourist cities with both huge profits and prestige, it also causes serious problems. For instance, population and resource pressure. Based on Milano's research in 2018, there were 30 million overnight tourists in Barcelona in 2017; however, the resident population is only 1.6 million. A large number of resources such as water were consumed by tourists. Moreover, extra infrastructure needs to be built in order to meet the incremental demand. Besides, the local environment and culture are also negatively affected by the development of tourism. These problems have made the local residents dissatisfied because their lifestyles, costs of living, and general well-being have been changed, which cause the increase of protests and movements as well as the formation of organizations such as the Network of Southern European Cities against tourism (SET) (Milano, 2018). Although Cheer (2019) states that there are a number of strategies to alleviate the conflicts such as reducing the visitation by a decrease in reservations or an increase in admission price, these strategies are unfair to tourists, and it might cause a more serious conflict between them and the local community. The current approaches to solve these problems are oversimplified, and a more efficient and widely accepted way is needed to address them. Before forming the potential solutions, it is necessary to deeply analyse how the local community is affected in terms of environment and resource in order to identify key aspects that should be focused in this domain. There are two major impacts, which are briefly introduced below:

### 3.1.1  Resource consumption

With the growth of the tourists, the destinations of the tourism are experiencing unprecedented challenges than ever before. Specifically, the tourism destinations' resources and cultures are included. Firstly, the resources of some destinations are consumed by the tourists at an extremely high level. The World Counts takes a golf course in a tropical country as an example, a golf course would be constructed with the growth of the tourists, the water consumption is as much as almost 60,000 rural villagers. Furthermore, the land resources would be damaged as well. There are over 1500 kilos of chemical fertilizers, pesticides and herbicides added every year, which significantly enhances the contaminate for local land resources.

### 3.1.2 Environmental impacts

#### Impacts due to tourist's behaviour

Tourist's disrespectful behaviour have already affected both the natural environment and the local community stability. Take Byron Bay for example, the number of residents who complain about the disrespectful behaviour of tourists is increasing.

'They call Byron like a really nice town, but … there is rubbish and stuff everywhere' an age-14-boy said (Milano et al., 2019).

'Escape the noise, traffic congestion, and violence associated with alcohol abuse' a local resident who leaves Byron Bay at every peak tourist time said (McLeod, Nolan, & Bartholomew, 2008).

It creates an uneasy feeling among all residents, and they are losing the sense of belonging and place because of the tourist's disrespectful behaviours. Although some of them might choose to move to other places in order to escape from the chaos, it might cause tensions and conflicts between the tourists and the rest residents. On the other hand, the natural environment including the historic sites and wildlife might also be affected by improper behaviour. For instance, LEWIS (2017) reports that a baby dolphin had died in Spain because visitors tried to touch it and take selfies with it. Also, in 2018, two young tourists were arrested in Thailand as they spray-painted graffiti on a historic brick wall (Thaiger, 2018). Similar things happened in a large number of tourism cities. Therefore, it is necessary to take actions to avoid those things from happening.

#### Impacts due to the development of tourism-related industries

The blooming tourism industry has led to a positive growth in the accommodation industry. There is a growing number of accommodations built close to or on the tourist sites in order to attract more tourists, however, it may pose a heavy burden to the natural environment such as energy waste and $CO_2$ emissions (Essays, 2018). On the other hand, the development of transportation also has a strong connection to tourism (Rodrigue, 2020). For example, new facilities such as roads are constructed to match the growth of tourism. Although efficient transportation benefits the tourists, it might potentially damage the environment. According to Sorupia (2005), air transport and road traffic are the main sources for the emission of greenhouse gas. The average energy consumed (the burning of fossil fuels) for a trip is 3.575 MJ which is the same as releasing 250 kg of $CO_2$, and the number would increase by 100% in 2050. So, the development of tourism-related industries affects the local environment.

### 3.1.3 Project focus

The brief introduction of these aspects reveals that they have negatively impacted on the local community in terms of resource and environment. Although it is important to solve these problems, some of them are hard to be solved through design computing. For example, for the first and third impacts, they might involve policy-making, new energy development, and cooperation between government and tourism-related industries (Sorupia, 2005). Moreover,

their positive effects might appear after a long period of time. So, it is inefficient to focus on these two impacts in this project.

The second impact, the influence of tourist's improper behaviour on the local community, will be focused since its effects are more direct, obvious, and broad. Moreover, it damages not only the relationship between the residents and tourists, but also the natural environment including the wildlife. Therefore, the alleviation of it takes priority over the other two impacts. The following part in this section will focus on the research of the tourist's disrespectful behaviour through literature study and interviews. Then, forming insights for the potential solutions.

# 3.2 Main Reasons that Contribute to Disrespectful Behaviour

Based on the research, we found out that it is caused by two main reasons, which are social media and place attachment.

## 3.2.1  Social media

Social media have changed the development of tourism, and it is one of the keys that contributes to the emerging tourist numbers. Based on Gretzel's report (2019), social media breaks the limits of space and time so that tourists are able to share their experience as blogs, photographs, or videos online, and they can inspire more potential travellers. Research has indicated that 52% of Facebook users' travel plans are inspired by their friends' posts ("How Social Media and Mobile Technology Impact Travel," 2017). Social media can also indirectly affect the tourist's behaviour. Specifically, the understanding of a place is formed when they are viewing the online blogs, photographs, and videos. For instance, they might think the places showing in the video are the iconic and must-see destinations, and what they have experienced also should be on their "must-do" lists. There is an interesting case on Rottnest Island in Western Australia. The Quokka selfies (Figure 1.1) posted on social media such as Facebook and Instagram caused a significant increase in tourist visitation, as they all came here for the purpose of taking selfies with the Quokka. Now, it has become a phenomenon on this island (Butler et al., 2019). The use of social media can also be used to explain the example that the baby dolphin died in Spain which is mentioned in the previous part. The tourists tried to touch it as other people in the social media did; however, the results were different. The real-life incidents and events show that social media might lead to the improper tourists' behaviour, and sometimes they are not able to identify whether it is harmful to the environment, wildlife, and community.

*Figure 1.1 The Quokka Selfies. Adapted from "The role of social media in creating and addressing overtourism" by Gretzel, U., 2019, De Gruyter Studies in Tourism, p. 65.*

Gretzel (2019) also points out that the persuasive power of social media encourages and facilitates tourists to produce and share lots of extensive and personalized photographs and videos. The most common way is to get a picture of themselves with buildings, sculptures, animals, or even food. However, these things they see or experience during travel are not enough to get other people's attention on social media because everyone else can also do the same thing. Thus, in order to make them shareworthy, they need to be unique and interesting enough, such as taking selfies with funny poses or interesting expressions on their face. However, some tourists might take drastic or extraordinary ways such as climbing heritage monuments or rocks so that tourists are able to take unique selfies or, as mentioned before, spray-painting graffiti on walls to prove they had been there. Their behaviours damage the environment and heritage properties beyond redemption. Linking back to the previous part, the disrespectful behaviours may be imitated by a large portion of tourists, which pose serious challenges to the natural environment and local community.
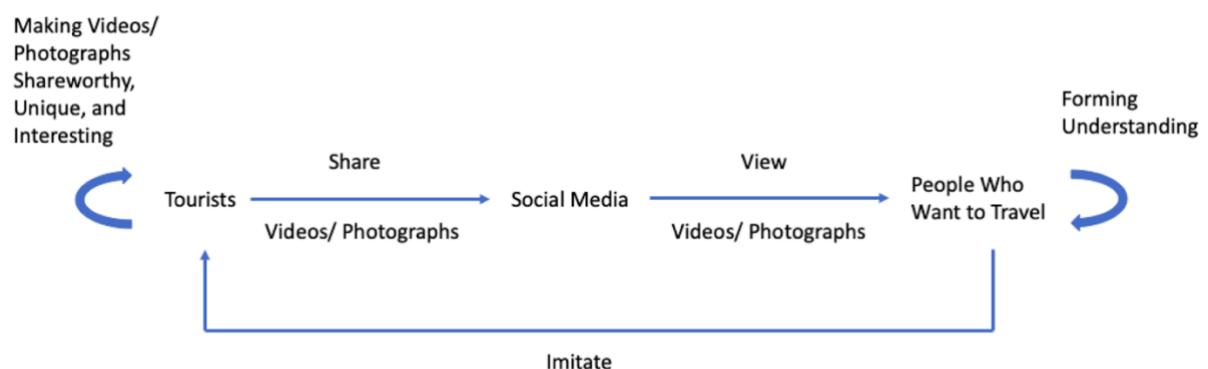


*Figure 1.2 How the social media affects tourists' behaviour.*

As figure 1.2 indicates, it is more clear to understand how the social media affects tourists' behaviour as a graph. It shows that social media affects both tourists and people who want to travel. Also, the improper behaviour would not be stopped under the control of the persuasive power of the social media. It means, in order to make the posts (videos and/or photographs) more unique, interesting, and shareworthy, the improper behaviour is continuing

to happen. Then, people who make travel plans via social media might be affected by those posts, and they might behave as those travellers. Therefore, in terms of social media, the key to solve the problem (initial solution) is to reduce the persuasive power of social media and to increase awareness of local environment and community protection, which eventually contribute to the reduction of improper behaviours.

### 3.2.2 Place Attachment

Although social media can affect tourists' behaviour, it is unable to explain some behaviours such as throwing rubbish everywhere as mentioned above. They might explain '… because there is no rubbish bin', 'everyone here just did it', or 'there are no people around here' rather than 'I saw it on Instagram'. Actually, based on Li's report (2014), place attachment is associated with this kind of behaviour. It is defined as 'a potential concept that may be used to influence behaviour by capitalising on an individual's willingness to protect important and meaningful places' (Ramkissoon, Graham Smith, & Weiler, 2013). It means the behaviour of a tourist with a high level of place attachment is more environmentally-friendly, such as picking up trash in a park; however, the tourist with low level of place attachment might not care about the environment around him/her. So, disrespectful behaviours might happen. For example, the tourist threw rubbish on the beach because there were no rubbish bins around him. It is also proved by Halpenny (2010), who states that the place attachment and people's pro-environmental behaviours are significantly associated with each other. It is why some residents are willing to protect their local community as volunteers, because they love the place they are living in.

For the potential solution, as Li mentioned in her report, it is necessary to construct an emotional connection between tourists and the environment/community, and this emotional tie between them can increase the level of place attachment.

## 3.3 In-depth research of defined initial solutions

Based on the initial research of these two reasons, the initial solutions in terms of social media and place attachment were given above; however, how to reduce persuasive power of social media, how to increase tourists' awareness, and how to build up the emotional connection are still unknown. So, they will be further explored in this section in order to figure out the requirements and needs for the initial solutions, to get a deeper view of this domain, and to form a well-structured outline and guide of the solution for this project.

### 3.3.1 Reducing social media's persuasive power

The persuasive power of social media may lead the tourists to do some behaviours that are harmful to the environment and the local community, such as climbing heritage monuments just for taking a photo. Therefore, finding needs and requirements to reduce it is important so that we are able to gain insights that can be applied to the project. Three questions that relate to social media's persuasive power will be explored in this part, which are the carrier of social

media's persuasive power, how to reduce it, how it exists in common social media applications, and award system analysis. Moreover, based on the feedback from the previous report, the research of additional areas, such as how persuasive power in common social media platforms (i.e. Facebook), will also be conducted.

### Social media's persuasion relies on messages

Based on research, Sparks, Perkins and Buckley (2013) state that social media's persuasion relies on messages, such as comments and pictures. How people feel the power of persuasion of social media is related to the received message content, source, and contextual characteristics. For example, if they think the message is useful, informative and accurate, then they would be more likely to accept it, which means the persuasion is more powerful. In our case, according to Sparks, Perkins and Buckley (2013), tourists can comment on travel destinations and related products in the third-party travel review sites such as TripAdvisor, and those online reviews could influence other people's travel decisions. The persuasion has also been considered in mainstream social media such as Instagram and Facebook, which will be discussed in the next part. Moreover, Carlsson (2018) states that, through the use of persuasion by social media influencers, their followers would be easily affected, and become more interested in their promoting. Since persuasion is based on the message itself and it exists everywhere in social media, it might be difficult to reduce the influence of persuasive power of social media on the behaviour of tourists. We cannot just say we would like to correct all improper messages from all people, especially from influencers, which is time-consumed and ridiculous. Conversely, since persuasive power can influence people's behaviour, it could be a strategy that uses persuasion itself to guide people's behaviour in the right way.

### How persuasive power works on people

In order to figure out how to do that, it is important to understand how it occurs. Martín (2020) posts that there are six principles of persuasion described by Cialdini who is known by his book 'Influence: The Psychology of Persuasion'.

1. Reciprocity – Humans would like to treat others as they would treat themselves, so if they get something from you, they will try to reciprocate. Example: see figure 2, the photo contest offering a $20 voucher to ask people to do something which is a way of implementing reciprocity.

2. Scarcity – Making something be limited and making it to compete is a way to persuade users. For example, the last seat of the plane and the last room of the hotel

3. Authority – People more likely to follow the famous person's recommendations.

4. Consistency – The consistency is important to create a sense of trust when offering something to your customers which means if you promise something, you must fulfil that promise.

5. Consensus – Through knowing what other people think about, we would be more confident to make a decision. For example, if a product gets lots of positive comments and reviews that people are more likely to buy it. Also, people are more likely to follow the person who has many followers on Instagram. For example, the rating of your product, the number of times people share your content and the number of followers, all these elements probably help people to make decisions.

6. Liking – People are easier persuaded by the people they feel well.

Some of them can also be seen in social media, such as an influencer's followers. So, combining the strategy that using persuasion to guide people's behaviour in the right way with some of these principles, a number of insights for the potential solution are formed:

- Before the user shares his/her travel experience as messages/videos/photos, providing suggestions about how other people thought about them. (Consistency principle)

- An award system that motivates users to behave environmentally friendly. For example, if something posted online is positive and it does not involve improper behaviour, then a gift would be given to the user. (Reciprocity principle).

- This feature can be combined with tasks. Through completing a task that relates to friendly behaviour, the user can get a reward.

- Cooperating with or guiding social media influencers to share positive travel experiences online so that their followers are more likely to accept it, follow it, or even change their beliefs. (Authority, Liking & Consistency principles)

*The use of persuasive power in common social media applications*

How it occurs in common social media applications such as Facebook, Tweeter, and Instagram will be analysed since, based on the research mentioned in the previous section, they are commonly used by a large number of tourists to share their travel experience and many people use them to make travel plans.

Gretzel (2018) states that since business models are commonly implemented in social media applications, such media are designed as persuasive technologies in order to attract more users to use them. So, it does not make sense for them to abandon using persuasive power. Instead, it exists anywhere so that users would feel the need to use those media frequently. For example, "badges" as a reward system is implemented in TripAdvisor, and it is used to award tourists who frequently post reviews and experience, and tourists are motivated to create a large number of posts for obtaining better badges. Moreover, Facebook and Twitter link users with the events, contents, or conversation they are interested in through "following", "tagging", and "hashtagging". So, related information would be pushed to users to let them stay engaged. He also points out that "following", "tagging", and "hashtagging" result in the cause of the 'influencer' phenomenon. People who want to get a very large following or audience would try to produce noticeable and attractive events and contents so that they can get noticed and increase the number of followers. These examples link back to the discussion in the previous section that "some tourists might take drastic or extraordinary ways such as climbing heritage monuments or rocks so that they are able to produce shareworthy content". Thus, a number of messages that involve improper behaviour might be produced, which would indirectly affect the audience and potential travellers.

There are two insights from these examples. Firstly, as mentioned before, award system could be used to persuade users to behave properly; however, based on the TripAdvisor case,

some users might focus on how to get a better reward and ignore the intention of the reward system and tasks that helping tourists to behave properly, which violates the goal of the concept. Thus, it is necessary to let users focus on both the tasks themselves and the reward they want to get. A deeper research of the award system is needed to explore it. In addition, it proves the third insight listed above that "Cooperating with or guiding social media influencers (travel influencer) to share positive travel experiences online so that their followers are more likely to accept it, follow it, or even change their beliefs" in an important need for the solution since what influencers posted online is easily accessed by their followers. If the messages they share to followers are positive, then they could be a guidance to tourists to behave properly in travel destinations.

On the other hand, these examples also reveal the abuse/misuse issue. Social media is an amazing place where people can share ideas. However, as the development of social media, abuse problem becomes more common nowadays. For instance, a large number of users use TripAdvisor to compare which hotel or travel is better by looking for the reviews. The activity which gets more positive reviews will attract more users. However, Salmon (2020) reported that the biggest hotel chain under the Travelodge umbrella and some top-rate hotels in the Middle East, Las Vegas that they had suspicious activity which means their reviews were faked through comparing almost 250000 reviews during the investigation. They doubt it because there are larger than a normal amount first-time reviewers gave the positive feedback in one hotel or travel experience. Since the user's decision will be affected by the rates and reviews, some merchants create a huge amount of new accounts and write great reviews for their own products so that users are more likely to accept those products. It violates the purpose of the review system. Our project is about encouraging people to post their green tourism experience. According to the principle of persuasion we mentioned before, users tend to follow the activity post which gets more positive reviews and rates. We don't want any people abusing our application to share any activity that is harmful to the environment and we don't want anyone to repeatedly write positive reviews for benefits. Therefore, we also need to consider how to maximize the effectiveness to stop the abuse issue.

TripAdvisor has an efficient strategy to against this issue. If there are some reviews for a product coming from the same IP address, TripAdvisor will stop the publication of those reviews (Salmon, 2020). Figure 1 shows the progress of how the review will be posted or rejected. If the review was detected by any suspicious by checking its IP address, it will be tagged as a suspicious review and it will be hanging over to human moderator to determine whether this review meets guidelines. Also, he points out that TripAdvisor has identified and prevented 1.4 million fraudulent reviews in 2018 because of this strategy. The large number of fraudulent reviews that had been identified reveal this method was effective.
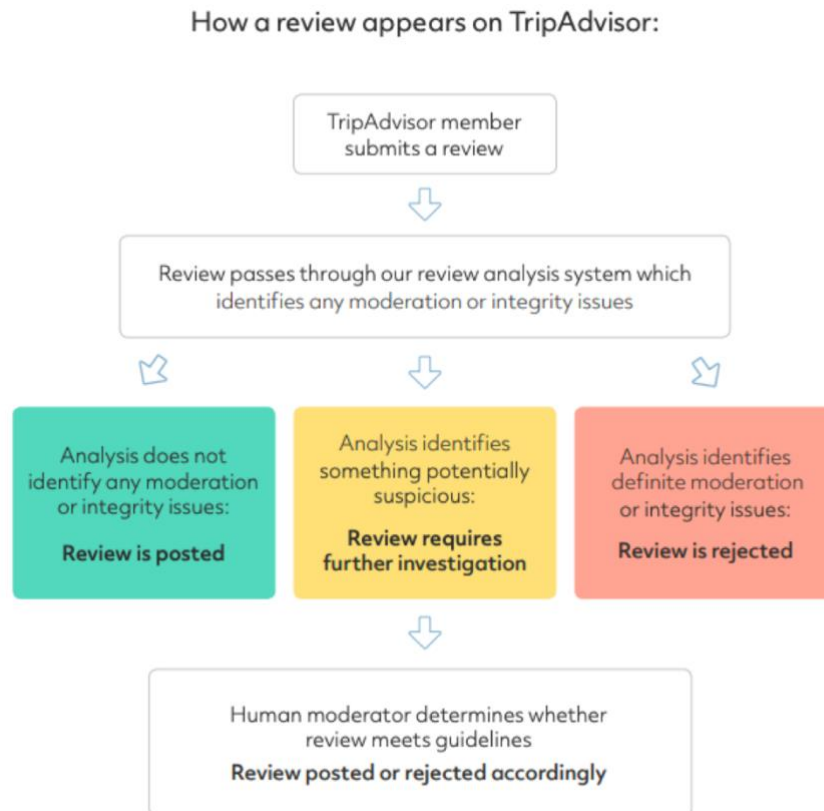
How a review appears on TripAdvisor:



*Figure 2 Adapted from "How TripAdvisor keeps fake reviews in check," by Salomon, 2020 (*https://blog.guestrevu.com/how-tripadvisor-keeps-fake-reviews-in-check*)*

After analysing these researches, we came up with extra needs for the solutions. Firstly, in order to prevent the user repeatedly creating new accounts and writing positive reviews for their own travel experience posts, we made a decision that only the people who have signed up can write reviews and give a like. Also, users must only use their phone number to sign up, it aims to make it harder for creating multiple accounts. Since TripAdvisor had great success in dealing with the fake reviews, we decided to follow their method. The system will check all the IP addresses for all the reviews and posts. Based on the IP address detection, it will collect any suspicious action, for example, if there are many different accounts write reviews for one post in one IP address, the system will temporarily block those reviews and hang in over to the human moderator. The moderator decides whether to post and reject these reviews. Also, any account relevant to the suspicious account will be marked as suspicious for a while. Also, the user can decide to block and report any inappropriate content for them. We will not use AI to detect the abuse since Facebook spends much money and resources for it, and they still cannot guarantee 100% abuse detection.

*Award system research*

As mentioned above, persuasion technology is commonly used in social media applications. One of the efficient strategies is using an award system to let users stay engaged, such as the 'badge' system in TripAdvisor. However, the implementation of the award system in these

applications is for the purpose of attracting more users and motivating them to write reviews and posts. This purpose is significantly different from our purpose of encouraging users to complete green activities so that they can behave more properly in travel destinations, and they would be rewarded. Although the benefits users will get are similar, the implementations are different. This is the reason the research of this feature is conducted in this section. We need additional information of what kind of reward is suitable for the solution.

Based on Luty's investigation in 2020, on average, people spend 9 days for a trip. It means our product would only be frequently used in a short period, and it might not be able to provide values to users at other times. So, the overall frequency of use is low. In addition, Yi and Jeon (2003) states that, based on the length of time, award can be categorized into two types: long-term award and short-term award. Long-term award means a person would be awarded after a long period; the later one means a person would be awarded after a short period. In our case, since the product is used in a short period, short-term award is much more suitable then long-term one. If a user is able to see or obtain the value from the product in a short time, then the motivation to change improper behaviour would be enhanced. For example, if a user can get an award such as a coupon everyday by participating in a daily task, then he/she would be more likely to keep participating in the tasks. In addition, Yi and Jeon also mentions that reward can be divided into immediate reward and delayed reward in terms of how many times a person participates in it, which means:

If immediate reward is implemented, then the user can get a reward directly for every visit, which highly promotes the user's participation.

If delayed reward is implemented, then the user can only get a reward after several visits. In our case, it might negatively affect the user's interest as well as our purpose in changing the user's improper behaviour. If the user wants to get a reward, then he/she needs to complete several tasks; however, it might take a bit long to complete them because tasks are various in our concept, and some of them might be time-consuming. For example, a user is asked to take part in a local activity, then it might take a few hours to achieve it. So, user's motivation could be affected.

Therefore, immediate reward is much more suitable in this domain. On the other hand, based on Yi and Jeon's report (2003), there are three types of immediate reward, which are coupon, token, and cash back. Compared with cash back and coupons, token has a number of advantages in this domain. Firstly, tokens are flexible. Users can convert tokens into other types of rewards based on the number of collected tokens, such as catering vouchers for 30 tokens or free ice cream voucher for 10 tokens. So, users can choose something they need rather than providing fixed types of rewards to users. Secondly, it is possible to cooperate with the local business so that it can improve the local economy. Moreover, since the number of tokens is adjustable, it means, for different levels of tasks, the system can simply adjust the number of tokens to balance the difficulty of each task. For example, 10 tokens are offered to a user if he/she successfully completed a difficult task or 3 tokens are provided if a simple task is achieved. If a coupon is used, then the value of each coupon might need to be recorded

in the system so that the system can assign coupons to different levels of tasks based on the value, which is not effective.

Therefore, tokens would be used as the reward system in this domain. Users are able to exchange other rewards they like based on the tokens they got. However, it also reveals a question about what kind of reward is commonly accepted by tourists. It might need to be explored in the next iteration with a questionnaire.

### 3.3.2 Enhancing place attachment

*Literature study of strategies that enhance place attachment*

The concept of place attachment is broken down by Tsai (2012) into three core factors, which are place identity, affective attachment, and place dependence. Each one of them contributes to the enhancement of the belonging of a tourist to the travel destination.

- *Place identity: it means the congruence between the image of a place and the tourist's self-concept.*

- *Affective attachment: which is tourist' feelings about the travel destination.*

- *Place dependence: the unique advantages of the travel destination compared with other places the tourist has been.*

Based on these three factors, she points out three strategies to improve the level of place attachment. Firstly, the place identity can be improved by increasing the tourist's self-connection to the destination. Secondly, the affective attachment can be enhanced by the perceived mood-boosting and worry-soothing things. The last one can be improved by the functional benefits and uniqueness of the destination.

So, additional researches were conducted in order to implement these strategies into our cases. Tsai (2016) reported that the most common way to perceive mood-boosting and self-connection is by participating in local culture such as food culture. Tourists taste local food to satisfy their physiological functions, and to form a basic understanding of local cultures so that their belongings to the travel destination can be enhanced. Moreover, through participating in local cultures, it brings a positive effect to their autobiographical memories, such as existing positive experiences. So, it contributes to the connection of the existing experience and memories and the travel destinations so that it is easier to build up a self-connection to the places. In addition, Williams and Vaske (2003) proves that the tourist's place dependence can be formed and improved by increasing the familiarity with a place. Combined with Firouzmakan & Daneshpour (2015) that the formation of memories and enhancement of social interaction strongly relate to the improvement of place dependence. Therefore, a potential strategy is formed:

Through increasing the tourist's social interactions, such as having more opportunities to participate in local activities that relate to the culture of the travel destination, to help them get familiar with the place, and to recollect this/her previous positive experience and

memories so that the place identity, emotional attachment, and place dependence can be linked together, and finally increase the tourist's place attachment.

*Interview with target audience in terms of place attachment*

A number of stakeholders were identified in the previous report. In order to get a deeper view of this domain and whether the potential solutions listed above work, we need to know how they think about it. So, interviews with stakeholders were held online. In the previous report, only two stakeholders including the tourists were interviewed online. In this iteration, three more interview sessions were held in order to ensure the reliability and the coverage of the data. The interview response detail can be found in the appendix at the end of this report.

Based on what we got so far, the first two interviewees mentioned the culture of the travel destination including local food and human culture is one of the main reasons they love the place they have been, and the first interviewee has been to Paris for five times because of it. It proves the resource mentioned in section 3.2, through connecting tourists' preferences with the various cultures of the place to increase tourists' emotional connection to the place that participating in local culture such as food culture can enhance self-connection as well as the place attachment. However, this interviewee also points out that it is highly related to the personal acceptance of the local culture, which means if the tourists do not like the local culture provided by the destination, then whatever the travel organizations or governments did to attract tourists, they would not work. For example, the first interviewee mentioned that Melbourne is her favourite travel destination because the combination of Asian food and western food is something she has never experienced before, and she loves it. Thus, it is important to consider not only the attractive things a place has, but also tourists' preferences.

This point can also be seen in the third, fourth, and fifth interviews (Section 11.1.3 – 11.1.5 in Appendix). Also, interviewee No.4 mentioned that he did not like Brazil at first. He liked Brazil after he learned about its culture and customs. Based on our previous research in section 3.2, place attachment is about constructing an emotional connection between tourists and the environment, and it is a way to improve tourists' improper behaviour. "United Arab Emirates Architecture" describes that emotional connection is a subjective feeling that creates a bond between two people and this feeling can be anger, sorrow, joy or love. We supposed that getting tourists to like the place by learning about the cultures and characteristics of the place is a kind of place attachment.

On the other hand, their answers also prove that the place attachment can reduce the possibility of improper behaviours, and they show the potential to protect the local community and its environment. For instance, first two participants said they have never done something disrespectful or improper to the local community and its environment because they like the place they have been and they do not want to damage it. On the other hand, they were asked what suggestions do they have in order to improve the sustainable tourism and to avoid improper behaviours. Education, punishment, and rewards are recommended by them. Rewards reflect the first persuasion principle mentioned in section 3.1, which means the

potential solution mentioned in the section 3.1 might work. However, based on current research, there is no evidence to support that other strategies recommended by them such as education and punishment are reliable, so extra research might need to be conducted.

Moreover, the third interviewee mentioned that if he saw some improper behaviour happen that he will try to stop it particularly the place he enjoys. Also, he said that the reason people damage the environment may be because they have a negative attitude to that place (Q7 in section 11.1.3). It proves the point mentioned in the previous paragraph again. However, the fourth and fifth interviewees disagree that low level of place attachment leads to improper behaviour by the tourists. They stated that people do these things because of their habit, and it is convenient for them to throw litters. However, their answers are based on their personal opinions without evidence because, based on the research we conducted, "it is convenient for them to throw litters" is due to low level of place attachment rather than habits. So, we will not change the potential solution. However, their answers show that we might need to consider the increase of tourist's awareness of the environment's protection.

In summary, the improvement of the potential solution mentioned in section 3.2 for enhancing place attachment could be,

- *Combining the tourist's preferences with the local activities that relate to the culture of the travel destination.*

- *When the tourist interacts with the local activities, providing its related culture and its characteristics to the tourist.*

- *When the tourist interacts with the local activities, consider how to increase the tourist's awareness of the protection of the local community and its environment.*

## 3.4 Background Research Summary, Direction & Solutions

Two main impacts of tourism on the local community in terms of the environment and resource were simply analysed. Then, the problem space was narrowed down, and the analysis of tourist's improper behaviour, including their influences, the reasons contributing to these behaviours, and existing solutions, was focused in this project. Based on the academic research and related news research, we found that improper behaviours are mainly caused by the persuasive power of social media and low levels of place attachment. Through the deeper research of these two reasons, insights for the potential solutions of each reason were formed. Based on the initial solutions, additional literature research and interviews with stakeholders were conducted in order to deeply explore the requirements and needs to achieve these solutions. Now, based on what we have so far, the updated solutions are given below:

The initial solutions for reducing tourist's improper behaviour are:

- Reduce social media's persuasive power.

- Enhance place attachment by building an emotional connection between tourists and the travel destinations.

Both enhancing place attachment and reducing social media's persuasive power will be focused on in this project. According to the background research we have conducted in the previous section, they contribute to different improper behaviours. Such as taking selfies with a baby dolphin is because of social media's persuasive power rather than low level of place attachment, which mentioned in the previous part. However, our purpose of this project is to let tourists behave more environmentally friendly ways as green tourism. So, it is important to consider how to help tourists to avoid all types of improper behaviours rather than just focusing on specific types. If only one of them is covered in the project, then the problem domain we focus on is not explored totally, and some other improper behaviours are still not covered. Therefore, the design direction we focus on in this project is both enhancing place attachment and reducing persuasive power of social media.

Based on the in-depth research mentioned in the section 3 and 4, the requirements and needs for the initial solutions mentioned above are:

- Implement an award system, and provide immediate short-term rewards if environmentally friendly tasks are completed.

- Provide suggestions about the videos and photos tourists post online.

- Cooperating with or guiding social media influencers to share positive travel experiences.

- Increasing the tourist's social interactions based on his/her preferences.

- Providing travel destination's related culture and characteristics.

- Help the tourist get familiar with the place.

- Recollect this/her previous positive experience and memories.

- Increase his/her awareness of protecting the local community and its environment.

# 4 Conceptual model

## 4.1 Problem Definition

It is a mobile application that, through providing immediate short-term rewards, encourages users to complete environmentally friendly tasks and to share their green travel experiences online after participating in local culture-related activities, which aims not only to enhance the place attachment, but also to use persuasion power of social media to guide users to behave properly.

## 4.2 The implementation of technology

The interaction paradigm is mobile, and the solution will be built on mobile application. The reason is continuous movement is involved during travel, which means our stakeholders such as tourists might need to keep moving from one tourist sight to another. So, mobile applications are the most suitable platform to implement the solution space since they are portable and flexible so that they can be easily accessed anytime and anywhere. Moreover, they contribute to access and analyse tourists' personal information and the information of travel destinations so that we are able to provide information that matches the user's requirements and needs. In addition, it provides a platform to link all stakeholders such as tourists, tourism departments, and local volunteers together. So, mobile devices are necessary.

## 4.3 High-level description

The mobile application as a social media provides a platform which allows tourists to share their travel experience with each other. In order to achieve the goal of green tourism, this app encourages people to share environmental friendly travel experiences through an award system. For example, this app will collect nearby green travel experience events which are held by some environmental protection organization and show it on a map in the location and the tourists can decide whether to participate in any one of them. After the user finishes one activity, he/she can upload the travel experience to the community provided by the App and share it with other users. The user would get a number of e-tokens based on the difficulty of the task and the number of received positive reviews and likes. The tokens can then be exchanged for different gifts. For example, a meal coupon that relates to the user's preferences. Moreover, the user can also check the reviews he/she got so that he/she is able to know how other people thought about it. So, the more positive reviews the user got, the more likely he/she would keep doing environmentally friendly things. This feature is created based on the first insight and the second insight of the potential solution that provides suggestions about how other people thought about posted travel experiences and providing a reward to the user if something posted online is positive and it does not involve improper behaviour, which is the Reciprocity principle mentioned in section 3.1.

Moreover, users can follow the other users they like. The user who got a number of followers will become an influencer in this App. So, if these influencers can join the daily green activities and share their environmentally friendly travel experiences, then they would guide followers to behave more properly while travelling. Also, the rewards influencers can get are more valuable than that of normal users. Therefore, the more famous influencers would post environmentally friendly travel experiences more frequently. This feature reflects the third insight of the solution of cooperating with or guiding social media influencers to share positive travel experiences online so that their followers are more likely to accept it and follow it.

On the other hand, since there are a large number of travel experiences shared in the community, the user can gradually learn the culture and characteristics of the travel destination by browsing other users' travel experiences. Since most posts are taken from the daily green activities of the travel destination, users are also able to make travel plans based on the posts they are interested in. Moreover, based on the user's preferences, the local activities that represent its culture and other unique features would be displayed on a map to the user, and they would also be included in the tasks to encourage the user to explore the travel destination. So, they have more opportunities to get to know something unique and different with their own culture. The overall feature aims to fulfil the fourth insight of the solution to enhance users' place attachment.

# 5 Stakeholders & Personas

## 5.1 Stakeholders

Based on the updated research and the improved concept we formed in the previous section, the types of the stakeholders are updated. Moreover, how the concept affects them is also included in this part. The stakeholders are composed of the following types of people:

- Tourists -

  Who wants to know what travel destination's activities are suitable for them.

  Who like to share their travel experience online.

  Who wants to support green tourism.

  Who wants to know how to behave properly in the travel destination.

- People who use social media frequently and make travel plans as a guide.

- Tourism department to raise awareness and establish relevant policies.

- Local environmental-protection volunteers.

- Local community.

### 5.1.1  Type 1: Tourists

*Who wants to know what travel destination's activities are suitable for them.*

This type of stakeholders might be not familiar with the travel place, and they do not know what local activities it has or, they have experienced a number of activities and were not suitable for these tourists. So, they want to know what activities are suitable for them. This concept is able to match this requirement. Through exploring what the travel destination has by viewing other tourists' posts and filter the posts based on their preferences, they are able to know what activities have and are suitable for them in the travel place, which aims to enhance their place attachment.

*Who like to share their travel experience online.*

This type of stakeholders is interested in sharing their travel experience on social media such as Instagram and Facebook. Compared with these social media, our concept is more focused on sharing travel experience to all tourists. It narrows down the types of audience, and other tourists are also able to see their posts.   It aims to enhance the communication between the tourists in the same place, to enhance the place attachment, and to reduce the persuasive power of social media from those common platforms.

*Who wants to support green tourism.*

This type of stakeholders are people who care about the environment and want to protect the local environment. However, they might not have any ideas what they can do in order to protect it. In our concept, green activities that aim to protect the environment and behave properly would be recommended to them, and they are able to support green tourism by participating in these activities. Moreover, through sharing what they have done in the community of the App, it can affect other tourists who also use this App to behave more environmentally friendly.

*Who wants to know how to behave properly in the travel destination.*

This type of stakeholders respect the local culture and environment, and they do not want to hurt any residents or environment because of their improper behaviour; however, due to the cultural difference, they do not know what they should do or should not do in the travel destination. In our concept, user's posts are based on the environmentally and community friendly activities they participated in, which means posts are related to green tourism including how to behave properly in the travel place. So, through viewing other user's posts, they are able to get to know the cultural differences and how to behave properly while travelling.

### 5.1.2  Type 2: People who use social media frequently and make travel plans as a guide

As the prevalence of technology, people are used to gaining tourist information on the social media platform, which may lead to a negative influence due to the potential destruction of the local area as the research shown in the background section. Statistics have revealed that around 86% of people are interested in a specific location because of the user-generated content and over a half (52%) of travellers made travel plans based on the other's posts on social media (Macdonald, L., 2019). It implied that there are a relatively large number of people impacted by social media on making decisions on travelling to specific locations. Furthermore, the research has proven that the mass media plays a significant role in traveller's behavior as it impacts the tourist's decisions (Edelheim, J. R., 2004). Subsequently, as social media influencers post images that have negative impact on the local community, there exists potential threats to the environment. Therefore, these groups of people are our stakeholders.

The concept we formed is able to help them to make environmentally friendly travel plans through viewing other users' travel experiences. Furthermore, the positive impact from the social media influencer in this concept is also beneficial for advocating the responsible travel habits and behaviours.

### 5.1.3  Type 3: Tourism organizations and local volunteers

The research has shown that there often exists cultural, historical and socioeconomic differences between the local residents and international tourists (Buckley, 2012). Thus, it is necessary to advocate related policies, guidance and awareness for the outcomers to protect

the local culture and to emphasise the importance and consequence of their behaviours. Local volunteers play an important role in assisting the local government to develop environmentally friendly tourist attractions and to remind the local tourists about their responsibility towards the environment.

Therefore, this concept can be a platform for them to share what the cultural differences are between the local residents and international tourists as posts. Then, people who use it to make travel plans can easily understand those differences through viewing their posts. Thus, they are more likely to behave properly while traveling. Also, it can be a way to share the interesting and unique features of their local culture.

### 5.1.4  Type 4: Local community

Local community will benefit from the concept in different aspects such as tourists would behave more properly in the community and more tourists could be attracted which might improve the local economy without causing negative impacts on the environment, since it not only alleviates the harm of the environment and sociocultural by raising awareness among tourists, but also promotes the responsible travel behaviours and influencer marketing that may educate the tourists and bloom the local economy.

# 5.2 Personas



Goals

• To avoid typical tourist attractions
• Narrow the travel locations based on his preferences
• To understand and respect the local culture and rules
• To see recommendations based on his past travel experiences and interests

**Luther Walker**

"Start to Nurture and Save Nature for your better Future"

**Background**

Age: 28
Occupation: Disk Jockey
Family: Single
Character: Loves Travelling
Technology Level: High

**Frustration & Pain point**

1. Not having personalised travel advices
2. Spending too much time on travel planning

**Main Points**

1. Has a high motivation to travel due to comfort and social mind
2. Preferred online and social media channels

**Description**

Luther is a Disk Jockey who travels 2-3 chimes per month for work and for relax. Because of the need to stay in the same city for around a week,  During his daytime, unlike the typical tourists who visit the popular attractions, he likes to wandering around the street to try out new things and explore the city and the local culture. Although Luther is good at using the technology, he would like some assistance and knowledge from the past tourists or the locals to better understand the local customs and rules.

**Scenario**

Luther used Digi to better understand the local culture from the posts of the past-visited tourists and the locals. Through the information, he was familiar with the local customs and the living habits. He has a basic understanding of the local environment, the precautions from the local authorities and the suggested supplies based on the environment. He also browsed the Green Activities in the area and found some interesting events.

When Luther arrived the destination, he signed up the Green Tourism Activities through Digi and got a chance to explore the unusual travel place and experience with the unique event that have positive impact on the local community.

*Persona a: Tourist who wants to support green tourism / Tourist who wants to know what travel destination's activities are suitable for them – Businessman*

**Jessica Galdot**

**Goals**

• Produce high quality vlogs and share valuable travel information to her subscribers
• Increase social media followers by posting interesting posts and info
• Explore up to 100 countries over all continents
• Experience the local culture and stay for several weeks to get to know the community better

**Background**

Age: 23
Occupation: Uni Student
Technology Level: High

**Frustration & Pain point**

1. Encountered difficulties when travelling alone
2. Film and process the high volume of vlogs by herself
3. Reply plenty of comments
4. Scheduling interesting travel plan

**Main Points**

1. Likes to travel to different countries
2. Interested in extreme sports
3. Usually travels alone under safe condition
4. Produce high quality Vlog to share personal experience

**Description**

Jessica is an uni student studying bachelor of Art, her interests are travelling around the world, explore new things and meet different people along the journey. She has a vlog channel to share her travel experiences, travel plan and some reminders of specific local custom and policies.

She is satisfied and enjoys her life, however, the only frustration she has was to arrange the next travel destination and interesting local activities in niche places.

**Scenario**

Jessica use DiGi to explore potential travel destinations. Digi then analyses her previous travel preferences and habits and suggested several destinations with local attractions. Among all of the suggestions, Jessica chose Mexico.

Jessica can further gather information of Mexico on Digi, such as basic demographic, geographic, weather and other's comments for the destination as well as local resources such as the cheapest place to get the ticket for the activity or where to get the best Mexican food. Jessica can use Digi to browse the restrictions for each attractions and the tutorials of having proper behaviours.

*Persona b: Tourist who use social media frequently and make travel plans as a guide / Tourist who likes to share their experiences online - uni student who produces vlogs*

*Persona c: Local community - National park worker*

The personas enable the team to better identify our target user groups and the use cases so that we can build corresponding features in our solution to maximise the outcome of protecting the local community. The three personas consolidate the concept from the previously mentioned stakeholders and were created based on the highest potential user.

For Persona A, Luther is the typical type of tourist who wants to support green tourism and wants to know what travel destination's activities are suitable for him. Thus, Luther uses our product to get to know the local culture, knowledge, others' experiences as well as the green events that suit his preferences. Research (Gorey, 2019) has shown that roughly 57% passengers were solo travellers, thus, the individual traveller who would like to immerse themselves into the local culture is one of our focuses.

For Persona B, Jessica is the social media influencer who shares travel information, personal perspectives and positive tourists behaviours on social media platforms. Section 3.1 has listed out the attributes of how persuasion works on people. Authority and liking are the two principles that are related to social media influencers, where they can utilise their fame to deliver the messages. Section 2.1 has defined how social media influences people's travel habits and decisions. Thus, Jessica's positive images on social media can benefit the environment as well as the other's perspective about the location. Furthermore, our product only contains sustainable aspects information such that when Jessica is planning for her next travel plan, she can easily find out the data that matches with her sustainable travel goal.

Persona C represents the local worker who is enthusiastic to protect the local community by advocating the tourists about the importance of environmental protection. As

Green Tourism

Paul posts information on Digi as a local resident, the potential visitors may have a positive impression on the place and have high reliability on the message, thus, it is easier for him to spread the positive tourist behaviours. The local Green Tourism Activities allow the users to have unique experiences, which enhance place attachment in aspects of place dependence and affective attachment ([section 3.2](#)).

The various features are mentioned in the personas:

- Provide general advices, local information to the tourists as well as recommend tourist attractions or activities based on individual preferences

- Understand the local knowledge in terms of history, cultural, additional information and the most suitable method to survive in the city

- Provide suggestions on travel plan that has the minimum harm to the local

- Remind people of their negative behaviours and potential threats they may cause due to the information from the unreliable sources

With the information stated above, the team can define a comprehensive solution to address the needs from our stakeholders. The objective of the application is to gradually impact on the other's sustainable behaviours and achieve the long term goal of changing the tourism mind and ethical standard.

# 6 Questions/areas of investigation

In this final stage, the background research and prototype testing feedback revealed that the research of a number of aspects, such as the award system, lacked detail, and they need to be further explored in order to identify additional requirements and needs for the solutions. Based on the team discussion about these aspects, we have identified the gaps from our knowledge, and two questions that relate to these aspects need detailed research before forming the final solution.

## Q1. What types of gifts are commonly accepted by tourists?

As discussed in the section 3.1 Award System Analysis, an immediate short-term award system would be used. Also, tokens are the most suitable award in our concept. Through completing tasks, a certain number of tokens are assigned to the user, which can be exchanged for different gifts, such as e-coupon. However, it is unknown what types of gifts are suitable and accepted for tourists. It is important because, if users are not satisfied with the gifts, then their willingness of participation might not be strong. So, it is necessary to investigate what types of gifts are suitable in this domain.

What we will do to solve this question: It could be conducted by using questionnaires, since the product could be used in different travel destinations, which means the user types are various. Moreover, with different background cultures and requirements, the gift's types might be various and complicated. Online questionnaires can efficiently obtain a large amount of target audience's responses with different background culture because it breaks the space limitation and it can be shared in online social media platforms and applications. So, online questionnaires would be used to explore this question.

## Q2. What is sustainable behaviour in this domain?

As mentioned in the conceptual model, tasks that aim to guide tourists to behave properly so that they are able to protect and respect the destination's culture and environment are implemented. However, "behave properly" is a general topic, and different people might have diverse views on it. The research of this feature has not been covered in this project since, in this project, we only focus on the reasons that contribute to disrespectful behaviour, such as throwing rubbish or climbing a heritage monument. So, in order to design suitable tasks that guide them to behave properly/environmentally friendly, it is necessary to understand what is sustainable behaviour in terms of green tourism.

What we will do to solve this question: this question can be solved by using literature review and interviews. Firstly, literature review of sustainable behaviour can help us to form a basic view of this feature, including its concept, existing strategies, and purpose. So, we are able to adjust the current solution to match this feature. Moreover, through conducting

interviews with the target audience, we are able to collect their responses about how they think about sustainable behaviour so that we can find additional insights of this feature.

# Q3. The third type of stakeholders (Tourism organizations and local volunteers)'s requirements and needs

Tourism organizations and local volunteers also benefit from the concept that, since they are more familiar with the local culture and how to travel environmentally friendly than tourists, they are able to post something relate to that in the community in this concept to help tourist to behave more properly; however, this type of stakeholder and how they benefit from the concept are formed based on how we understand the concept rather than feedback from them, which means their requirements and needs for the system or features might not be totally considered. So, we need to get their feedback in terms of this domain as well as the concept.

What we will do to solve this question: Interviews with them are needed to explore their requirements and needs in this domain. Specifically, we can contact the local tourism organizations, such as Leisure Tourism or Visit Brisbane, so that we can figure out what additional insights they need about this domain, and the concept could be improved.

# 7 Prototypes/sketches/studies

Prototype link - https://pr.to/RIWFES/

This is a high-fidelity prototype which was created from the second iteration. There are two reasons that we created the prototype. Firstly, it is an easy way to visually describe the conceptual model. Especially in the presentation when the audience has not adequate knowledge of the project, the prototype helps them have a basic graphical understanding of the concept. Also, the prototype is an efficient tool to verify the design of the solution. Recall from the background research in part 3, using persuasive prover to lead tourists' behaviour and increasing the place attachment are the two main solutions for the problem. Therefore, this prototype combines these two solutions to a form of travel experience sharing platform. And in order to test if the design of the solution successfully delivered to the stakeholder, the prototype user testing was also running in this iteration.

**Interface 1: Homepage**

Based on the background research about the place attachment (Section 3.2), increasing the opportunities to participate in local activities and focusing on making the tourist learn about the local culture to build an emotional connection in the place is the way to increase the place attachment. Therefore, in order to address increasing place attachment, we thought that building this app based on a travel experience sharing platform is an efficient way to make them quickly learn about local culture and recommended travel activity. The interface looks like a normal social mobile application in that there is a bottom bar to swap different function pages and bottom middle 'Camera' button is to post posts. The search bar is used to find specific content by filtering keywords. The travel experience posts list on the screen are significant and it is the main feature related to the solution domain. The travel experience posts are the way that the user can quickly learn about the culture and activity. Each travel experience post used a card UI design method to display because card UI design is a good way to composite a variety of relevant elements into one area. Each post includes its brief description, photos, poster's portrait and the rating. About the coupon icon at the top-right corner on the screen, it is the representation for the reward system which is using the persuasive power to encourage users to keep posting and using the app. Since it is just a prototype and the icon was chosen from the UI elements library in Proto.io, the development team is free to redesign and change it.
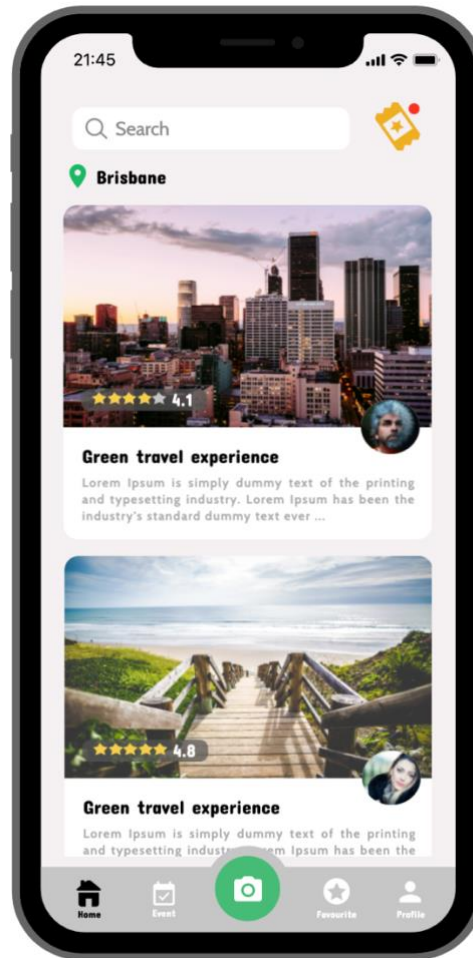
**Interface 2: Travel experience post detail page**

When the user taps one of the travel experience posts, it will direct to this page to show more details about this post. It is also a regular online posts format that includes the main body of the content and the users' reviews. In this app, there will be two types of travel experience posts, one is related to the green travel activities (See section 9.3) and another one is not.Therefore, there is a green tag of 'Green Travel Event' under the title so to differentiate them. The main features related to the solution domain are the rating, comments and the reporting system. The rating and comment features used persuasive power to affect people's choice that the post which gets many positive ratings and comments will be more acceptable by the people (relate to the consensus principle of persuasion in section 3.1). Also, according to the research about abuse on the internet, the reporting system is the easiest way to reduce and control the abuse. The design of the button which goes to the reporting has already been widely used, this icon looks like a horizontal list and it represents a button list here. However, it should also be tested in the prototype testing to see if the stakeholder can recognize it.
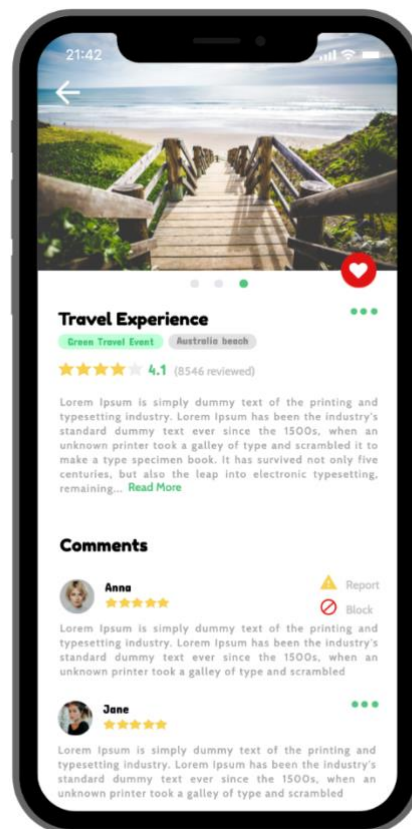
**Interface 3: Green travel activity map**

This is another significant feature in this app which is a map showing local green travel events and the place you can consume your reward points. These green travel events here are the real events running by some local sustainable organizations so the user can attend one of them. The green travel event acts as a guidance to lead the people who want to behave properly in the travel, but they don't know how. Also, in order to encourage users to attend green events, it will corporate with the reward system (discussed in section 3.1) that users will get benefits when they attend any of these.
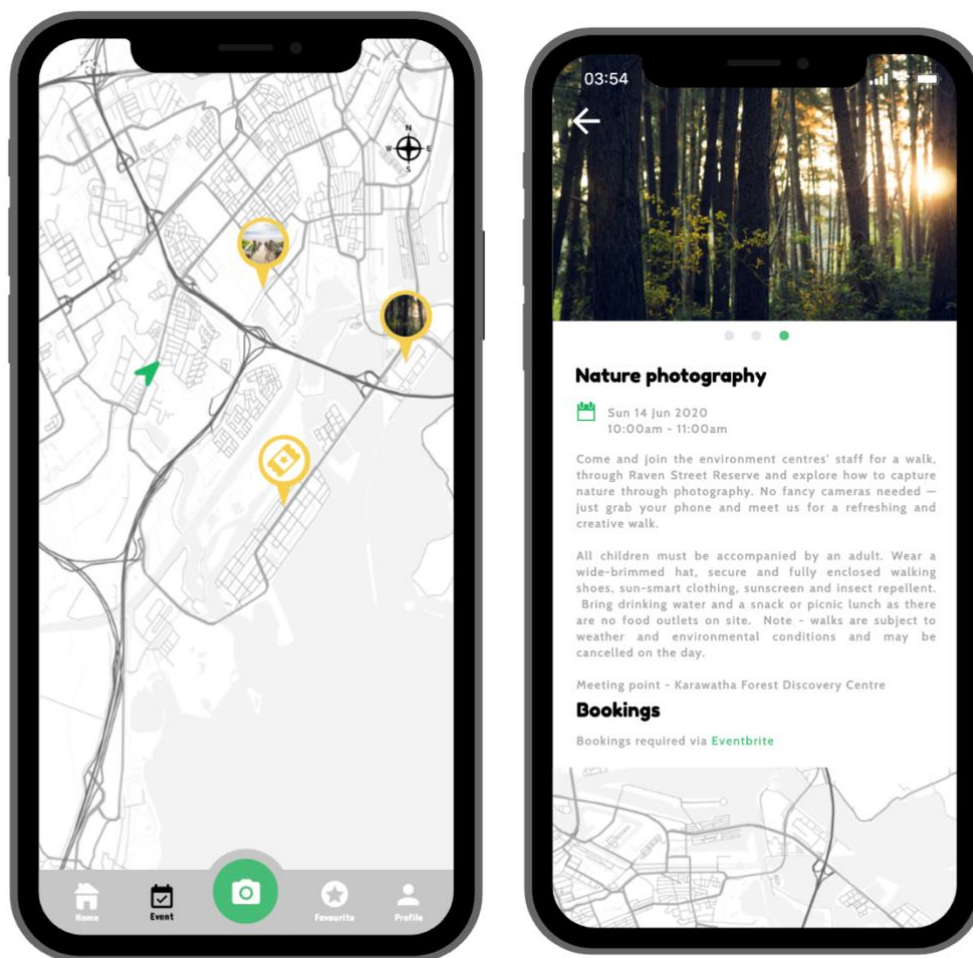
**Interface 4: User profile**

The user profile will be accessed when the user taps another user's avatar. This page will display each user's basic information which includes username, the number of followers and his previous posts. The design of the posts is the same as in the home page because it is for consistency so that the user can recognize it. The reason we want to show the number of followers and the number of likes the user got us because we want to have some influencers in this app. Based on the discussion of the persuasive power on social media, these influencers are easier to lead his followers' behaviour.
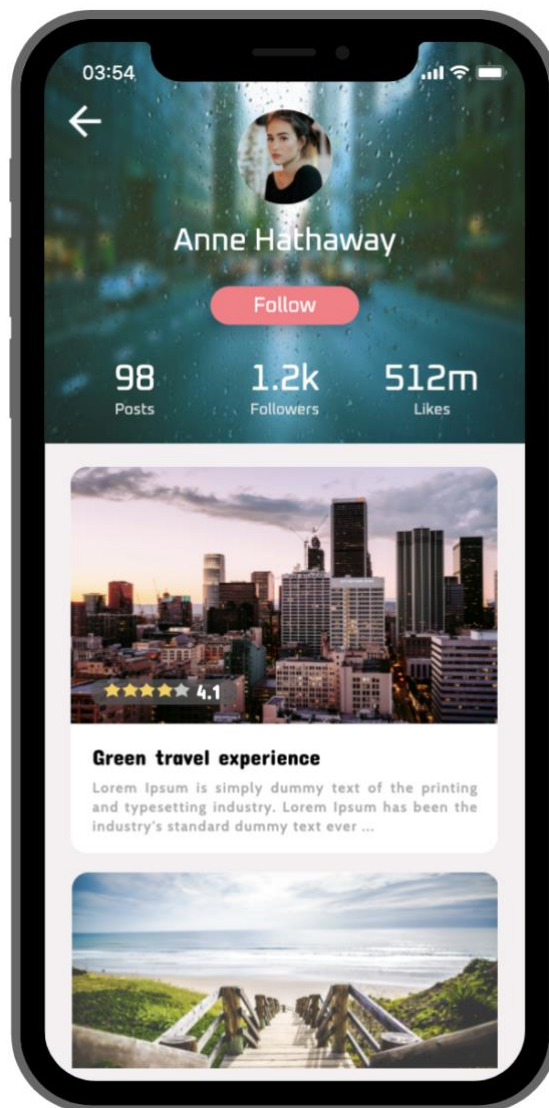
# 7.1 Interaction
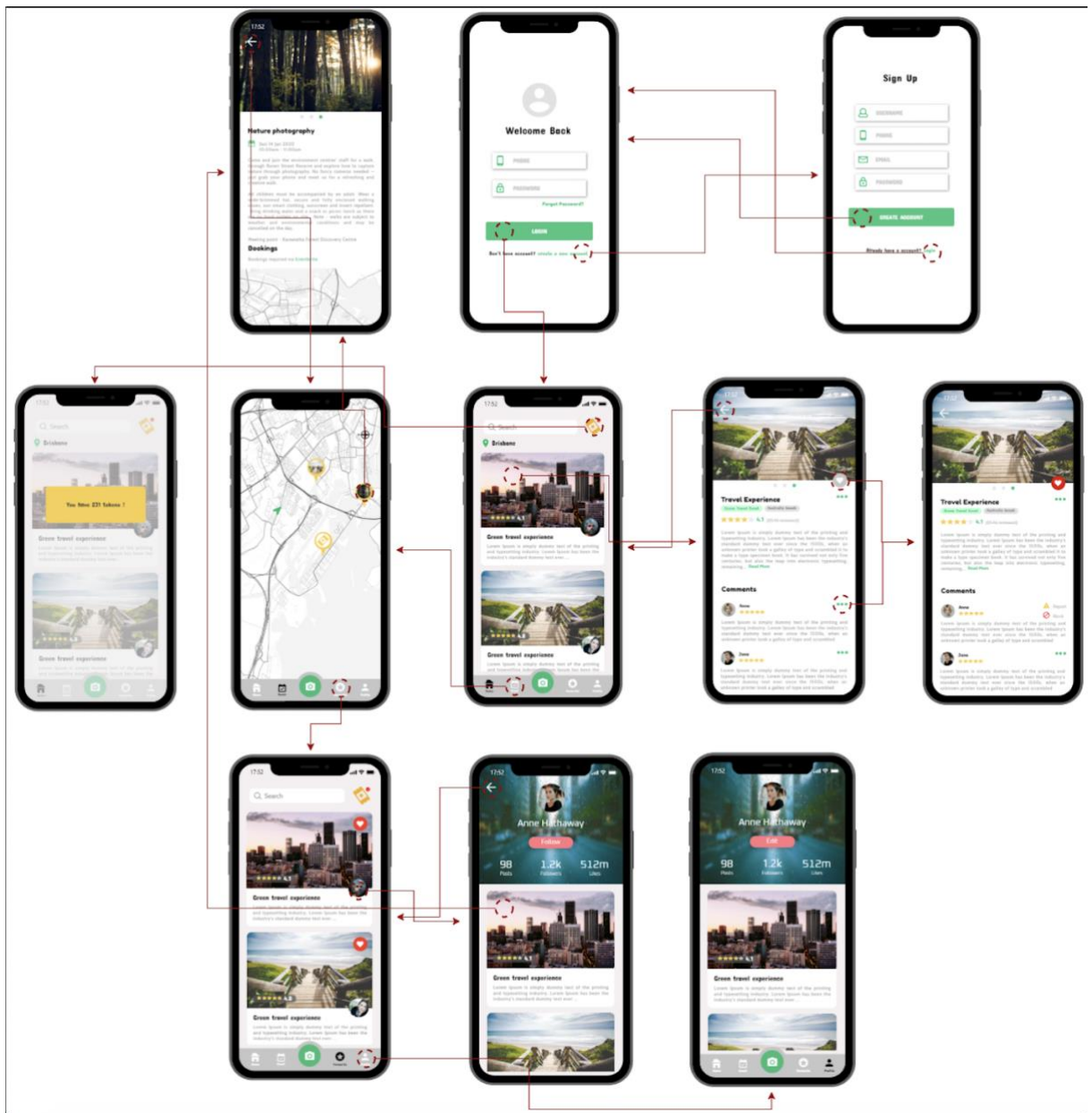
## 7.2 Prototype Testing Evaluation & Insights

### 7.2.1 Prototype testing plan

1. Elaborate the problem space and concept to our tester
2. Introduce our solution/prototype
3. Navigate the application
   i) Sign up an account and enter the main page
   ii) Explore other's posts, like the post and browse others' comments
   iii) Navigate to the event page and explore the nearby 'Green Tourism Activities'
   iv) Navigate to the favourite page
   v) Check on your profile page and browse your own posts
4. Feedback regarding the use flow/interface design
5. Feedback regarding the concept and the prototype
6. General Feedback

### 7.2.2 Prototype questions

1. Whether you will use the app, why?

2. Whether the solution fits the concept

3. Whether the solution helps people to act sustainability and why?

4. Will the rewarding system allow you to use the application more often?

5. What will you usually do to understand the local culture and information before travel/while making travel plans?

6. Have you ever finished a certain task because of the final rewards?

7. Have you ever attended events that have a positive impact on the environment such as collecting garbage on the beach? If yes, what is your motivation?

### 7.2.3 Testing Results

User A, travel lover who has a mid-high awareness of sustainable travel

The application is easy to navigate and concise. I can easily access the required pages without further direction, however, the only concern is that the application did not show what the tokens are and how it can be used.

I usually look at other travellers' blogs and follow their travel plans when designing my own itinerary because people will put on their opinions and reminders which is more detailed. I am a result-oriented person, thus, I will complete a certain task if the rewards are appealing to me. I haven't had a chance to join the sustainable event, because I did not have the path to receive related information, however, I am willing to attend such activities due to the positive impact on the environment as well as my own interests.

I will definitely use the app, since I like to explore the local activities and the attractions when I was travelling, and the application shows the unique travel locations within the area and the activities that are beneficial for the environment. The solution fits the concept well as the information in the application prompts the users to behave properly while travelling by sharing others experiences and recommending sustainable events.

User B, general public who has high user experience skills and mid level sustainable awareness

The design of the application is comfortable in terms of the colour tone, use flow and the interface design. I need little assistance to navigate through the application.

I like the design of bowsing my own posts under the profile page, as it can clearly present my past experiences. My suggestion is that adding the date and time on each post to show whether the information is outdated or not. The token is confusing since it does not elaborate the function of it. I really like the idea of the awarding system, which encourages the potential users to participate in the green activities, so that the users may experience and understand more in the local culture and further enhance place attachment.

I usually plan my travel by browsing others' blogs and youtube vlogs, because it is the most straightforward way to understand others' experiences. If the reward possibility is low, then I will not attend, however if it's accumulating rewards/points, then yes. I haven't participated in a sustainable event, however, I think I will attend such events if friends are going as well since it is a good activity.

User C - general public who has low level of sustainable awareness

I have no confusion about the prototype, since the useflow is direct and the interface is like the other social media platform. The prototype is user-friendly and the feature is simple.

I have used Tripadvisor when arranging my travel plans, since it has other reviews and through others posts I am able to identify whether the location matches my expectation. The website is information transparent and is more reliable. Based on whether the rewards match my desire and will further drive my behaviours. I don't have the opportunity to attend sustainable events since it is not my interest.

The concept cannot really influence people's behaviours since the loyal user group is people who have high sustainable awareness, thus, it is hard to attract the general public to act sustainably. For marketing aspects, promoting rewards to the new signup group or referral to new users is beneficial to expand the target group. Furthermore, the information diversity may be improved such as adding the nearby sustainable restaurants or hotels to allow users to explore more related information.

<u>User D - general public who is a fan of social media and travels a lot.</u>

It has a good usability for this app that I know how to use this app without any help. However, I was a bit confused about the reward system. There was not any instruction telling me how to use it and why it is here.

I really like using social media such as Facebook and Instagram. There are many bloggers frequently post their travel experience and I am always attracted by the beautiful photos in their posts. I think that's how I get my first impressions of a lot of places. And after that, if I was going to have a trip, these places I got first impressions from social media will be my first choice.

I think if I am the user for this application, I will try to attend the green activity for getting some rewards. But I think I won't keep doing this for a long time since I am not a sustainable tourist at all.

### 7.2.4  Evaluations and Insights

- Most of the interviewers are reward-driven, as they will complete certain tasks based on the outcome.

- Most of the testers plan their trips through other's blogs and vlogs as it is easier for them to decide based on other's experiences

- One of the users uses Tripadvisor to plan the itinerary as the platform is reliable and the reviews are a great guide to access the needs

- Some of the testers have mid-level sustainable awareness, since they would attend green activities with certain requirements such as with accompanies.

- One of the users likes the idea of Green Activities since the events can enhance tourists' place attachment and sense of belonging.

Based on the testing result, most of the participants gave positive feedback on the interface design. They didn't meet any trouble in the test process, it shows the usability of this app is working well and this app fits the user's mental model. However, the reward system made them get a bit confused that they don't know how to use it. Through the discussion about this situation, we found that the reason may be because there is no instruction for the reward system and rewards can only be received when they write a post with positive feedback. Since this app is using a reward system to encourage people to attend the green travel event and write posts for it, it does not expect many people would like to initiate writing any in the first time they get to this app. Therefore, it is important that the people know there is a reward system at the beginning even if they have not started to write any posts. The potential solution is including a kind of instruction when they first sign in. For example, bind the reward with a mission system. The mission system can be an instruction to tell you how to use this app like follow 10 people you can get 100 tokens, attend a green

travel event and write a post you can get 500 tokens. The mission window will pop up when the user first login the app. Therefore, if they can finish the mission step by step, they get familiar with the app and know how to use tokens.

Question 5 was designed to test whether this project is in a right way about making people share their travel experience to increase their place attachment. Most of the participants said that they always use social media to make plans for the trip. Both user A and User D said that their preference of the travel destination mostly depends on the travel posts or travel blogs they have seen before. These travel posts gave them first impressions of the place and it is the easiest way to learn about some culture there. Recall from the reason we made this app based on a travel experience sharing platform, we want the user to build some emotional connection by browsing some travel experience posts and knowing the culture is also a way to build the connection hence increase the place attachment. Therefore, it seems the project is on the track.

Based on the prototype result, there is a significant defect in this app and it had been talked about in the third presentation. This solution may not be able to fundamentally change the behaviour of the people who have no sense of environmental sustainability. As the user B pointed out that if the reward possibility is low that he may not attend the green travel event and the user D said he may not keep attending. This concept is not suitable for the people who are not used to behaving sustainably in the trip. For the people who are willing to behave properly, this app offers a convenient guide to help them to find green travel events. Through discussion, we think the main point is trying to find a way to make the user realize the benefit of sustainable tourism and it needs more research. For now, the potential solution as the user B said that he is willing to follow his friends' decision. Therefore, using the reward system to encourage people to invite their friend to use this app. This may be a good way to let the user find out their friends who like sustainable travel and they may be able to affect each other.

# 8  Working Plan

In this section, the overall design process from the beginning of this project to what we have achieved so far is given. It aims to provide a basic view of the project progress to students who will take over this project and build the solution we formed. The overall progress is summarised based on the second and third iterations. There was no plan for the first iteration since it focused on problem identification. On the other hand, key information, such as milestones, deliverables, dates, and strands, is given for each iteration so that it can provide a clear and concise outline of each of them. Moreover, the agreed processes for team maintenance will be described at the end of this section, which aims to provide you suggestions and strategies to deal with the common team problems that might happen in this domain.

## 8.1  Team Working Plan

### 8.1.1  Plan for the second iteration (Interim Project Critique)

| Iterations | Steps | Deliverables | Time |
|---|---|---|---|
| *Milestone-1 Continually Explore the domain (27/04/2020 – 02/05/2020)* | Step 1: Further research about the first question: what are the key reasons that contribute to social media's persuasive power. | Explore this question through online research and academic research via UQ Library, finding potential strategies or solutions to reduce it. | 27/04/2020 – 29/04/2020 (3 days) - Since step 1 and 2 are two individual directions, so in order to make it efficient, the team is separated into two sub-teams. Three members will work on this step. |

| | Step 2: Further research about the second question: how to enhance place attachment. | Interview with the target audience to find out reasons behind the thoughts and how it happens. Also, academic research about this domain to find out any strategies to increase it. | 27/04/2020 – 29/04/2020 (3 days) - Another three members will work on this step. |
|---|---|---|---|
| | Step 3: Analyse the collected data and form a general solution based on insights. | Form a general solution and a conceptual model for the solution. | 29/04/2020 – 02/05/2020 (3 days) - A team discussion would be held to share the core information collected by each sub-team. |
| *1 Days Break* | | | |
| *Milestone-2 Identify Core Functions & Middle Fidelity Prototype (04/05/2020 – 10/05/2020)* | Step 1: Identify the core functions that need to be tested in the prototype. | Team discussion about the solution, and choose the important functions. | 04/05/2020 – 04/05/2020 (1 day) - All members work on it together since each member could form a general idea to the domain. |
| | Step 2: Prototype interface building | Construct a middle-fidelity prototype based on the selected functions through using Proto.oi | 05/05/2020 – 06/05/2020 (2 days) - Three members who are good at building prototypes would be assigned to this step. |

| | Step 3: Prototype Testing | • Book a testing room<br>• Invite target audience<br>• Hold a prototype testing section to test the constructed prototype.<br>• Collect all responses from the testing. | 07/05/2020 – 10/05/2020 (4 days) - Another three members will work on the preparation of the testing, such as booking a testing room and inviting potential participants. |
|---|---|---|---|
| | *1 Day Break* | | |
| *Milestone-3 Feedback evaluation & Questions Identification (12/05/2020 – 18/05/2020)* | Step 1: Evaluate the solutions based on the collected feedback. | ›rove the solution based on the evaluation. ially identify the success of the solutions. | 12/05/2020 – 15/05/2020 (4 days) - It would be done by all members. |
| | Step 2: Identify the further questions that need to be answered to expand the understanding of this domain. | ure out what knowledge we missed in the research of this domain, and analyse how to address them. | 16/05/2020 – 18/05/2020 (3 days) - Same as above, and similar structure of the team member cooperation is also applied to the third iteration. |

## 8.1.2 Plan for the third iteration (Final Proposal Report)

| *Iterations* | *Steps* | *Deliverables* | *Time* |
|---|---|---|---|

| | | | |
|---|---|---|---|
| *Milestone-1 In-depth research & prototype testing (20/05/2020 – 01/06/2020)* | Step 1: Further research about the second question that 'Could education and/or punishment be strategies to let tourists behave more environmentally friendly?' | Explore this question through online research and academic research via UQ Library | 20/05/2020 – 22/05/2020 (3 days) |
| | Step 2: Further research about the third question that 'What is the third type of stakeholders (Tourism organizations and local volunteers)'s requirements and needs in this domain?' | This question can be explored through interviewing with this type of stakeholders, and it might be easy to contact them via a travel organization website/ forum/ or face-to-face interview. | 20/05/2020 – 24/05/2020 (5 days) * It starts on the same day as the first step. The team would be split into two small teams, and each work would be assigned to each team. |
| | Step 3: Improve the potential solutions based on the exploration of question 2 and 4 | Evaluate the data we collected from step 1 & 2, then to see which part of the solution could be improved. | 25/05/2020 – 26/05/2020 (2 days) |
| | Step 4: Adjust the prototype based on the improved solutions | A prototype was built by using Proto.io, and we will adjust it based on the feedback from Step 3. | 27/05/2020 – 28/05/2020 (2 days) |

| | Step 5: Prototype testing & Evaluation | • Find target audience (it needs to be done before 25/05/2020) <br> • Book a meeting room (it needs to be booked in advance) <br> • Testing <br> • Feedback sort out and evaluation | 29/05/2020 – 31/05/2020 (3 days) * Two team members will be responsible for finding the audience and book a meeting room. Rest of the members will focus on testing and evaluation. |
| --- | --- | --- | --- |
| | Step 6: Identify additional important questions that need to be explored | Based on the evaluation, some questions/areas might need to be further explored. Make them as a note in the team Slack. | 01/06/2020 (1 day) |
| | *1 Day Break* | | |
| *Milestone-2 Solution & concept improvement (03/06/2020 – 12/06/2020)* | Step 1: If additional questions/areas are identified in the last step, then it would be conducted in this step | The way to conduct it is unknown since it depends on what the questions or areas are. | 03/06/2020 – 05/06/2020 (3 day) |
| | Step 2: Adjust the solution based on the evaluation and question exploration | Combine the information we got from interview evaluation and step 1 together to adjust the solution. | 06/06/2020 (1 day) |

| | Step 3: Improve the concept based on the solution | As described in the step. | 07/06/2020 (1 day) |
|---|---|---|---|
| | Step 4: Decide whether to update the middle-fidelity prototype to match the improvement or create a high-fidelity prototype | Based on the feedback from testing and Step 1, if the core features need to be adjusted, then a middle-fidelity prototype would be created again; otherwise, a high-fidelity prototype would be created to further test the overall structure and idea of the concept. | 08/06/2020 – 09/06/2020 (2 days) |
| | Step 5: Prototype testing & evaluation | Find target audience (it needs to be done before 06/06/2020; audience should be different with the last testing) Book a meeting room (it needs to be booked in advance) Testing Feedback sort out and evaluation | 10/06/2020 – 12/06/2020 (3 days) * the team would be split the same as mentioned before. |
| *Milestone-3 Final submission (20/05/2020 – 15/06/2020)* | Step 1: Adjust the solution based on the evaluation & Improve the concept | As described in the step. | 13/06/2020 (1 day) |

| | | |
|---|---|---|
| Step 2: Sort out the future work that need to be done for future iteration | Since this is the end of this semester but the project might not be finished, guidance that shows what needs to be explored or improved for the future work would be explained and listed. | 14/06/2020 (1 day) |
| Step 3: Create a video to present what we have done so far | Summarize the overall works we have completed, and key information about each work. Then, based on that information, create a PowerPoint to present the overall project. Also, record it, and make a video. | 14/06/2020 – 15/06/2020 (2 days) * This step and last step will start at the same time since they do not conflict with each other. The Step 2 would be assigned to 2 team members, and the rest 4 members would focus on creating a video for presenting the final work. |

## 8.2 The Agreed Process for Team Maintenance

There are three agreed processes for the team maintenance. Firstly, the limitation of face-to-face contact constrains offline team meetings, which negatively affects the idea sharing and information collection inside the team. So, we all agreed to have an online team meeting every week via Zoom or WeChat. It ensures every team member is able to know the current working process of each other and share ideas and information to the team in time. The overall process of the meeting is separated into three steps: each member talks about what they have done since last week for the work they have been assigned. If problems are reported, then the team leader Shawn would simply record them at this step, and then we would discuss about them at the second step; moving to the third step, based on what we got so far, we would review the current stage of the design process, and identify what needs to be improved and what new things need to be done next. Based on each member's ability such as idea forming, research, and writing, the works mentioned above would be assigned to each member. The time spent for a meeting is around 90 minutes. The meeting time for each week

is unfixed, and it is decided based on each member's current timetable for other assignments on that week.

Moreover, the available working time on this project is short because this is the final semester before graduation, and each team member is also busy with other assignments. So, in order to maintain a high level of team efficiency and achieve the goal of each process successfully, the team is split into sub-teams for some tasks. For example, when we need to investigate the social media's persuasion and place attachment. We formed two sub-teams, and each one worked on an area. So, these two areas were investigated deeply at the same time, which helped us to save a plenty of time on research. It was also applied when we needed to construct a prototype and the preparation of the testing session.

On the other hand, in order to have a high-performance maintenance team, one of the most important parts is to quickly and effectively deal with conflict. It could be conflict between members or conflict between the current working process. In terms of team members' conflict, we have an agreement that no conflict would be brought to next week, and it has to be solved as soon as possible. Since all meetings now are online, which means it is hard to detect any possible conflict inside the team. In order to avoid that, we have two strategies. Firstly, if it happened, then involved team members can report it to the team leader Shawn, and he will try to solve it between members. In addition, the most important thing is to ensure that any parts of work assigned to each member are not repetitive and ambiguous. They must be easy to understand and clearly separated with other team members' works.

# 9   Team Reflection & Conclusion

The background of the domain was gradually explored through three iterations. Also, with the development of the depth of the background, more and more insights were formed, which contributes to the improvement of the solutions and concept. Although the outcomes of this project were positive, there were a number of weaknesses and strengths in terms of the understanding of this domain, and team conflict also happened during these iterations.

Firstly, the feedback of the first proposal reveals that the background research clearly presents the domain; however, some other sections of the proposal did not link back to the insights obtained from the background research. For example, personas were mentioned in the stakeholder section; however, we only simply described the features of each persona without linking them back to the research. It seemed like an isolated section in the proposal, which only confused the readers. We had an online team discussion about this problem and reviewed those sections again. We found that the main reason was a number of team members misunderstood the parts they focused on because of the lack of face-to-face communication. Although the team leader described the overall ideas and the requirements for each part, it was hard to check whether all other members understood them or not. If one member was working on another assignment or unrelated things while having the meeting, then he/she might not able to understand the content, and he/she might just simply response that "I get it" because he/she thought he/she could quickly understand the overall content by review it later, and he/she did not want to hear the whole content again. It might cause the disconnection of each section in the proposal.

In order to address this problem, as mentioned in the previous section, we decided to set flexible meeting time for every week. Specifically, before moving to next week, each team member needs to report the available time for next week that they ensure they are free and they would not do anything else during the meeting. So, the meeting manager would decide a meeting time for next week based on the collected timetable. Moreover, each member's camera needs to be turned on so that we are able to have a sort of face-to-face communication. Furthermore, after tasks were assigned to each member, they need to review the other completed tasks that relate to their tasks. For example, if a member is working on the personas, then the member who works on stakeholders is required to check his/her personas. It means to let each team member monitor each other's works. This strategy was implemented in the second and third iteration. Based on the feedback we obtained, the general outcomes of the proposal and the domain research were positive, and each part coherently linked to each other.

On the other hand, there are a number of strengths of this project/domain. Firstly, this domain is unique, and there is no academic resource that systematically focuses on the research of tourist's improper behavior. This proposal broadly collected a large number of available resources and analysed the main reasons that contribute to improper behavior, which could be used as a guidance to provide useful suggestions for the research of other related

projects. Moreover, each main reason was gradually explored from the surface to the inside. For example, for the research of persuasive power of social media, we firstly explored how it exists on the Internet and its carrier. Then, moving to what can make it happen via six principles, and potential strategies to address/use it in common social media applications, then we came up with a number of important insights and potential solutions. On the other hand, the place attachment was broken down into three aspects, and based on academic research and interview, potential strategies were formed, such as having more opportunities to involve in local culture. With these in-depth research, there were a number of key outcomes. Firstly, through providing rewards to ask users to do environmentally friendly tasks, it is efficient to motivate users to behave more properly in travel destinations. Also, the feedback from the prototype testing shows that having more opportunities to participate in local activities that present the local unique features and culture is helpful to enhance place attachment. Moreover, although these reasons did not seem to be connected, it is possible to combine them together by using mobile technology. Overall, the process was fluent and coherent, and the domain was deeply investigated, which contributed to the further understanding of this domain.

There are some weaknesses in this project. Firstly, although the main reasons were deeply researched in this project, some aspects of this domain could be further explored, and there are three unsolved questions which are mentioned in the question section, which relate to the award system, sustainable behaviour, and stakeholder research. So, in order to fully address the domain problem, these questions might need to be answered, and they might bring additional insights to this domain.

In addition, there is another weakness in this project. Based on the feedback from tutors, since we are creating a mobile application, it is also important to consider how to attract the target audience to use it rather than keep building new features or keep improving the existing features in the system. What we were doing seems like we were improving a product that has been already constructed, and improving the concept and solutions based on obtained insights. Then, it might cause a problem that, although we are able to reduce tourists' improper behaviour, what are the unique differences between our product and other common social media applications such as TripAdvisor? Why do people tend to use our product rather than their products? Since this is the final stage of the proposal, it means it is impossible to address this problem now; however, students who enrolled in DECO 3801 might take over this project. So, it is necessary to provide possible solutions for this problem for them. A simple online team discussion was held at the end of the proposal presentation, and we discussed it. A possible solution was formed, which is, firstly, to deepen the core features of our product. For example, highlight the UI design of the unique features such as award system and activity participation in the product. Moreover, further research of similar products to explore their weaknesses and avoid these weaknesses in the design of the product. In addition, interview with people who commonly use these similar products to figure out their needs and requirements for the design of user interface and user experience of the product.

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# 11 Appendix

## 11.1 Interviewee No.1

| 1. What is your favourite place you have travelled? |
| --- |
| Melbourne |

| 2. Why is it your favourite place to visit? |
| --- |
| I like the trolleybus because it is not common in other cities. Also, there are lots of food and lots of chinese restaurants here. It is diversity and modernization. Also, it makes me feel life of ease. With the development of the city, we can not see any buildings left over from history in many cities. However, I can see many historical architectures in Melbourne which makes me happy. |

| 3. What was the most impressive thing about you there and why? |
| --- |
| The first thing coming in my mind is I have eaten many foods in there with my friend |

| 4. If you see any negative behaviour which damages the environment (Throw rubbish on the floor, Graffiti), what would you do? What If it happens in your favourite travel place? |
| --- |
| There are some elderly people who will drop litter everywhere and spit on the floor. I remembered that once I went out with a friend and he just threw a spit ball under my feed. I feel terrible but didn't do anything. However, if it happens in Melbourne, I may remind him not to do this. Because I am very familiar with life in Chinese, but I'm still a stranger in Melbourne that I should focus on my friends' actions. Also, I think it relates to the environment that Melbourne gave me an impression of cleaness. |

| 5. Did you have any similar improper behaviour? If yes, why did you do that? If yes, ask if this place is your favourite travel place you answered in the first |
| --- |
| No |

| 6. Do you think a person's belongings to a tourist destination will affect his behaviour, Why? |
| --- |

Yes, I think it depends on the environment. If a city is very clean and beautiful, I think people will watch their manners. However, if a city anywhere is dirty that they may think it doesn't matter of their improper behaviour.

| 7. | What do you think why those people damage the environment? |
|---|---|

I think they may be too selfish that they think that action is convenient for themselves

| 8. | Do you have any suggestion on improving social awareness on sustainable tourism? |
|---|---|

Set up more signs or increase education?

# 11.2 Interviewee No.2

| 1. | What is your favourite place you have travelled? |
|---|---|

Paris, France

| 2. | Why is it your favourite place to visit? |
|---|---|

Paris is a city full of culture and romance. The world-class museums are the main reason that the interviewee is fond of Paris, as they provided student discounts to the visitors and the history and culture were spectacular and well-known.

| 3. | What was the most impressive thing about you there and why? |
|---|---|

The most impressive thing about being in Paris is that

| 4. | If you see any negative behaviour which damages the environment (Throw rubbish on the floor, Graffiti), what would you do?   What If it happens in your favourite travel place? |
|---|---|

There were people in the museums who spoke loudly between each other, whereas the museum should be a quiet place with little voice interference. It indirectly affected the others' customer experience and the ruin of socio-cultural. Also a lot of people are smoking and throwing cigarette butts everywhere, which not only impacts the environment but also generates second hand smoke.

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| 5.     Did you have any similar improper behaviour? If yes, why did you do that?<br><br>If yes, ask if this place is your favourite travel place you answered in the first |
| No |
| 6.     Do you think a person's belongings of a tourist destination will affect his behaviour, Why? |
| Maybe, but the interviewee mentioned that the people are the main factor that affects her behaviours. |
| 7.     What do you think why those people damage the environment? |
| The people may not have the awareness of their behaviours that may cause the negative impact of the environment. |
| 8.     Do you have any suggestion on improving social awareness on sustainable tourism? |
| By changing the behaviours through both punishment and rewards. |

# 11.3 Interviewee No.3

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|---|
| 1.    What is your favourite place you have travelled? |
|  I think it is Europe, especially France. |
| 2.     Why is it your favourite place to visit? |

Europe is a continent with thousands of years in western culture and history. The reason I prefer France is that I think it is the center of all western culture and history.

3.        What was the most impressive thing about you there and why?

The most impressive thing there is a visit to the Louvre Museum. It was established in 1793 with over 4 hundred thousand collections including Mona Lisa, Venus de Milo, and so on. You can learn traditional western culture and history there, therefore, I really enjoy France.

4.        If you see any negative behaviour which damages the environment (Throw rubbish on the floor, Graffiti), what would you do?   What If it happens in your favourite travel place?

I will go and tell him or her gently, it is improper behavior here and ask the person changing his mind friendly, particularly the place I enjoy.

5.        Did you have any similar improper behaviour? If yes, why did you do that?

If yes, ask if this place is your favourite travel place you answered in the first

Yeah, definitely, sometimes. It is not on purpose. It is my favorite place, Louvre Museum, and I shared my thoughts with my friend, which is a little bit loud to others, and I was noticed by a person. Definitely, it is embarrassing, and I won't do that again.

6.        Do you think a person's belongings of a tourist destination will affect his behaviour, Why?

Yeah, I think so. Take myself as an example, I would be very careful when I visit the Louvre Museum because I love and enjoy it.

7.        What do you think why those people damage the environment?

Firstly, they probably are not on purpose. Then, probably they don't like the place, however, they must go there followed by someone. Or, they might see the negative behavior and feel interested to imitate them.

8.        Do you have any suggestion on improving social awareness on sustainable tourism?

Yeah, probably do some education classes before entering the place, tell visitors what you can do, and can't do. And, do more educational advertisements in the place.

# 11.4 Interviewee No.4

| 1. What is your favourite place you have travelled? |
| --- |
| I love this city in Brazil. Although I seldom stay in a city for a long time, I was impressed by that experience. |
| 2. Why is it your favourite place to visit? |
| Brazil is a city with a large population, which I don't like. However, due to some restrictions, I was forced to stay for a long time, which led me to seriously understand the culture and customs of the city, which made me deeply like here. |
| 3. What was the most impressive thing about you there and why? |
| Most beautiful place, e.g. Sancho Bay in Fernando de Noronha Archipelago, Pernambuco, voted the most beautiful beach in the world by TripAdvisor (the app I always used) and Bonito, Mato Grosso do Sul which is the rivers in the region are known for their crystal clear waters. |
| 4. If you see any negative behaviour which damages the environment (Throw rubbish on the floor, Graffiti), what would you do?   What If it happens in your favourite travel place? |
| There are too many people and the state of security is not as safe as you think. The price of some land tour places is too high. In addition, the surrounding environment is also a big problem. Some large-scale companies or tourism companies overdevelop the land and the environment have been greatly damaged. |
| 5. Did you have any similar improper behaviour? If yes, why did you do that?<br><br>If yes, ask if this place is your favourite travel place you answered in the first |
| I usually like a person, but because of some communication problems in language, it's easy for me to disturb others when I ask for information, and the local people always want to help me, which makes me feel ashamed. Besides, because I am a girl and go alone. Occasionally, I am afraid that someone will follow me and ask for help loudly, but the result is not what I imagined. I'm at a loss. I'll pay attention later. |
| 6. Do you think a person's belongings of a tourist destination will affect his behaviour, Why? |

For example, when I go to the beach, I will bring some of my food and water. When I leave, I will pay attention to not littering and making garbage. I will also give a warning to those who throw garbage.

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| 7. What do you think why those people damage the environment? |
| In my opinion, no matter how bad the environment is, many people follow this bad habit. |
| 8. Do you have any suggestion on improving social awareness on sustainable tourism? |
| Learn about the city culture and some environmental protection measures of the destination in advance |

*5.* Interviewee No.5

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| 1. What is your favourite place you have travelled? |
| Pantelleria, Italy |
| 2. Why is it your favourite place to visit? |
| It's the pearl of the Mediterranean which is one of Sicily's most characteristic minor islands |
| 3. What was the most impressive thing about you there and why? |
| It is a secret place for invisible celebrities or those who are innocent and shy. I am also addicted to its shows on Hollywood movies and across the pages of magazines. Everything went quiet and peaceful. I enjoy sitting before dusk with the sun highlighting the shapes and colours that are so special on Pantelleria. |
| 4. If you see any negative behaviour which damages the environment (Throw rubbish on the floor, Graffiti), what would you do? What If it happens in your favourite travel place? |
| Whether it is at a tourist attraction or any other place. If I was seeing someone throwing rubbish in front of me, I would rush up angrily, accuse them and tell them to pick up the trash on the ground and throw it into the nearby trash can, if there is no trash can nearby, then throw them Take it or put |

it in your own pocket. Of course, I will criticize the tourists who litter everywhere because I am not living in this place. I am also a tourist, which will affect my reputation as a tourist.

5. Did you have any similar improper behaviour? If yes, why did you do that?

6. If yes, ask if this place is your favourite travel place you answered in the first

I have no littering behavior. I will classify them and throw them into the appropriate trash bins correctly. In case there are no trash bins nearby, I will temporarily put them in my pockets until I see the bin.

7. Do you think a person's belongings of a tourist destination will affect his behaviour, Why?

Yes, personal education level, moral and upbringing decide one's behaviour.

8. What do you think why those people damage the environment?

There are two aspect people littering:

The influence of the surrounding environment. In some places, because there is no formal sanitation system, the surrounding garbage piles up and no one processes it. (i.e. no trash can, or the trash can is full and no one cleans it up) which leads to piles of trash.

**The Psychology littering:**

They don't want this thing, and people will throw litter for convenience. The key question is why they do not litter, because this simple thing is littering. Why do people take a piece of useless garbage? This is a question without thinking.

9. Do you have any suggestion on improving social awareness on sustainable tourism?

This seems to be a very simple solution. A simple step of the solution is to contact local tourism officials and ask questions about installing more trash cans. In addition to this, there is no other more efficient way, because for those who are accustomed to throwing away garbage, education is not working. They already have their own thinking and will no longer receive new education and receive criticism. Even if they criticize education and add fines, they will still throw garbage next time.