This exegesis is submitted to the

Auckland University of Technology

in partial fulfilment of the degree
of

Master of Design

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The Design and Development of a Mobile App: Branding Indonesia as an Experience Tourism Destination

Go . Virtual . Experience

AUT

Attestation of Authorship

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the qualification of any degree or diploma of a university or any other institution of higher learning, except where due acknowledgement is made in the acknowledgement."

Bambang Parmadi Buditomo

17 May 2018

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Acknowledgement

I would like to express my sincere gratitude and appreciation to my parents for their support, and my wife for being my anchor and source of hope. A whisper always encouraged me and lifted up my spirit. Without them, I would not have completed this thesis.

I would like to express my gratitude to my supervisor, Professor Leong Yap for his guidance, input, discussions and encouragement. It has been an amazing journey and meaningful experience. Professor Leong Yap has been a beacon, a compass, and a lighthouse that has always guided me in finding the purpose of this journey. I appreciated his patience and tireless support which without it, it would have been impossible for me to finish this thesis.

My warmest regards to Michelle Young for being a friend and a comrade, and to Po Tanner for being a friend and for her insights.

Finally, my sincere thanks to all my friends and lecturers who have contributed their time and assistance to my studies.

Abstract

The main aim of my research project is to use a multidisciplinary and mixed method approach to design an app to increase Indonesia's brand awareness as an adventurous place to visit. Tourism is becoming a significant service for most of the country, and thus the services that are related to tourism contribute to a huge percentage of Indonesian Gross Domestic Product. It is a highly competitive business requiring originality and innovation across the nation's geographical, cultural, service and political status. It is a multi-sector industry that encompasses the livelihood of the masses. While this may be complex, it also an important wealth earner for various sectors that are involved in tourism.

My app informs and entices certain kind of personas to more likely select Indonesia other than a neighbouring country as their travel destination. Therefore, the app must reflect these needs and must be highly interactive and meaningful to navigate, and leave a permanent impression. To do so, understanding certain aspects of the potential users are required. These potential users are a new generation of tourists, whose characteristics are being perceived through customers' journey as detailed in Chapter 2.

My design is applied to a strategic, multi-disciplinary research method and an innovative design method to gather insights on the core criteria emotions and experiences about visiting a place such as Indonesia. It includes a strong literature review in the humanities, branding, and app design. These principles and theories were some of the most important design criteria that guided the app creation. Therefore, it is not merely the design of an app that is technical and beautiful, but rather it is an app that is informed by the needs of tourists that come to visit Indonesia for various reasons, culture, country, and with various amounts of money to spend. To understand the human issue, I gathered insight from the Maslow Hierarchy, Fogg's Behaviour Model, Four Pleasure Principles, and Indonesian cultures to inform the design of my app, as explained in Chapter 3.

My app design follows the Human-Centred Design approach which has five different processes, which are empathy, ideation, prototyping, evaluation, and iteration. Moreover, this is discussed in detail in Chapter 5, where I describe in detail the function interactivity content of my app design. However, technical feasibility alone will not make a good emotional app. It must, according to design thinking, have two other elements: desirability and viability. This DVF model is important in this project, as discussed in Chapter 4.

The final app design consisted of three major criteria of the design element. These processes were serving to give the user a meaningful, pleasurable experience, education, and entertainment. Together with gamification. I believe I have made my app unique with added value compared to competitors' apps that mainly serves information.

This project consists of an exhibition of practical work that represents the main body of applied research and the exegesis represents the report of the project.

Research Aim

This project aims to research on increasing Indonesia's brand awareness and competitiveness in tourism by understanding visitors' characteristics and preferences, and connect with them through a mobile application. The mobile application functions to present information about Indonesia with the added purpose to help to connect travellers in a virtual world entertainingly, and provide them with integrated services for a meaningful, immersive experience.

Research Objective

The primary objective of the research was to find a meaningful emotional experience that Indonesia needs to offer to trigger a higher number of visitors and deliver a meaningful experience to the users in the most engaging way. An understanding the characteristics and preferences of these visitors were needed.

With this objective in mind, I have collected knowledge and methods on what Indonesia has done for its tourism and analyse whether it has successfully catered for the needs of tourists, and provide improvement for users' experience in engaging Indonesian travel destinations.

I have researched an engaging and immersive way to introduce culture and travel destinations for the tourism industry through a mobile application, and connect to tourists and engage them with a meaningful and unforgettable experience.

Research Questions

This research design project asks one main question: how can an insight of human factors, technology and emotional app design be applied to brand Indonesia as a preferred destination in the highly competitive tourism industry?

Therefore, there are some research questions which arise that need answers. These research questions are:

- What are the potential visitors' emotional needs?
- How is a meaningful experience created?

- Why is it necessary to build cultural brand authenticity?

- Was it effective for increasing awareness of Indonesia?

- What are the channels and contents to apply this knowledge that connects directly to the users?

Chapter 1.
Introduction

1.1.   Breaking the Tradition, Advancing to the Future __

Imagine yourself as a traveller trying to find information on your trip destination. You want an app to make your travel to be meaningful and memorable, but also to inform, guide, and offer structure to your activities.

While the outcome of this design project is an app, this project breaks away from traditional app designing by expanding its purpose. This app has been called to do other vital functions as a means of Indonesian tourism brand awareness frontline by employing a new business model for its sustainability.

Through the app, I have created five valued propositions that will make this app different from competitors. This app will:

1.   Provide information and educate the users to understand certain aspects of Indonesia's cultural richness interactively and tailored to the users' preferences.

2.   Incorporate gamification to allow the personas to have a meaningful experience and create a memorable brand value.

3.   Socially enabled for like-minded individuals to connect and share their experiences.

4.   Guide the users by utilising local and community knowledge.

5.   Sustain itself by implementing a business model that will also stimulate the local economy.

Reason to travel is an inner motive, and the motivations determine the type and trip destinations[1]. Indonesia has the fourth largest population in the world[2]. With its emerging market and expanding economic possibilities, Indonesian economy has potential growth through tourism comparable to neighbouring countries[3]. Indonesia needs an edge, a requirement for regional competition with tourism as one of the leading attractions.

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[1] (Matteucci & Gnoth, 2017)
[2] ("Countries in the world by population," 2017)
[3] (Hall & Page, 2016)

According to the research data from the World Travel and Tourism Council, tourism contributed 6.3% of the world GDP in 2016 and it is forecast to increase to 4.2% per annum until 2026[4]. Therefore tourism

Figure 1. Indonesia Tourism Logo (2017) retrieved from http://www.indonesia.travel/gb/en/home.

is important in many countries' development, especially Indonesia, with its potential travel destinations which targeted 17 million visitors in 2018.

Indonesia's digital platform of promotional media and e-tourism, was launched in 2013, with "Wonderful Indonesia"

branding to support its awareness. Since the government started the massive global promotion in 2015, "Wonderful Indonesia" has become increasingly known and ranked 35th in the world in 2017. Although its rank increased from last year, it is still under 23rd placed Malaysia's "Truly Asia" and second-placed Thailand's "Amazing Thailand"[5].

Figure 2. Malaysia Tourism logo 2018.

The criteria that is used for this ranking are measured by the total online search volume for tourism-related activities and attractions. The more online tourism-related searches a country has, the more appealing that country brand is[6]. This means Indonesia still has room for improvement.

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[4] (*Travel & Tourism: ECONOMIC IMPACT 2016 WORLD*, 2016)

[5] (Bloom Consulting, 2017)
[6] (Bloom Consulting, 2017)

Figure 3. Tourism Brand of Amazing Thailand

An authentic and innovative branding can bring this improvement. It needs a business strategy that harnesses a trifecta of art, science, and technology to deliver meaningful experiences to customers. Indonesia has improved the strategy by evolving into smart tourism to increase its competitiveness, which is a logical development based on innovation and orientation in information and communication technologies to address this challenge[7].

As studied, using a branded mobile application is a practical approach to marketing[8]. However, Indonesia has only applied this concept to the information technology infrastructure and did not harness the opportunity to integrate an efficient, direct promotional medium. This is evident with the many independent travel applications for each destination that disintegrate from a unified system.

Even though applying a smart tourism strategy into integrated mobile apps as a brand frontline would be effective to reach the users, many of them are short-lived because they ignore the requirements of maintenance, promotion, innovative contents and expanding the user base.

An app cannot be created and designed without understanding its repercussions. It must be desirable, feasible to build with the

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[7] ("Smart Tourism Role In Tourism Industry," 2017)

[8] (Bellman, Potter, Treleaven-Hassard, Robinson, & Varan, 2011)

strength of operational capabilities, and viable with a sustainable business model.

By applying this model, not only can the app itself operate in continuity while supporting itself without burdening the nation's budget, but it can also contribute to Indonesia's revenue. With the correct business model and cooperation with the stakeholders, it can bring a positive impact to the regional economy and increase the nation's welfare.

I argue that in the era of the experience economy, the stakeholders should not only focus on promoting Indonesia as a product but should also focus on the tourists themselves. It must understand its customers. Whereas to create a meaningful experience more real and relevant for the users, a product must adhere to Human-Centred Design principles that are tailored to their needs.

The tourists today are very different. This is an era of a new emerging market, the experience economy, where the tourists' characteristics and preferences determine the target audiences; an era where stories, context, and experiences' consumption hold more value than before[9].

Tourists appreciate nature and cultural beauty, but they value more physical engagement and a co-creation component of the visit[10]. Moreover, with these preferences, this is where the mindset of tourists can be adapted to strengthen Indonesia's brand awareness through the app.

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[9] (Benckendorff, Moscardo, & Pendergast, 2010)

[10] (Morgan, Elbe, & de Esteban Curiel, 2009)

1.2.   The App and Its Purpose

- User Interface Graphics that evoke positive emotion
- Contents that evoke meaningful experience

-What works in the field of gaming as a way to engage audiences

-Can it be implemented with current technology

CONTENT DESIGN   **TECHNO LOGY**

USER FOCUSED

-Understanding the travellers
-Understanding how Indonesia perceived by the travellers
-What the travellers need out of the apps

Figure 4. The trifecta of app design and creation.

By adapting to the users' mindset, an app as brand frontline has direct contact with interactivity and can make tourists feel able to relate. This can trigger their interest and willingness to visit Indonesia.

The change and the shifting of modern tourists' habits compared to the earlier generation is apparent[11]. With the advancement of technology and access to the internet, tourists can gain easily information on travel destinations. Surveys by TripAdvisor in 2015 suggested that 42% of tourists around the world are always connected and use the internet to search, book services and do activities.

My app, LOOPIN designed by addressing the previous app's limitations, and created to adhere to Human-Centred Design and accommodate the users' needs and preferences. It will fill the gap and revolutionise how a tourism app will be developed. More than providing information on the trip destination and activities to have,

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[11] (Glover, 2010)

this app will also act as a hub for tourists to spread user-based content. By utilising Web 2.0 technology and adapting the Internet of Things, it is possible for LOOPIN users to create and publish their contents within and connected to social media.

LOOPIN's users will have a chance to gain information on their preferred destination in a three-dimensional realm where they can have virtual interaction with the contents. This edutainment experience can be achieved using Augmented Reality. It will also engage the users on a personal level with its gamification content of the travel destination.

With the emphasis on this experience and packed with appealing branding, it is expected to increase awareness of Indonesia as one of the most desirable and preferable tourists' destinations.

CHAPTER 2.
Connecting to Specific Users
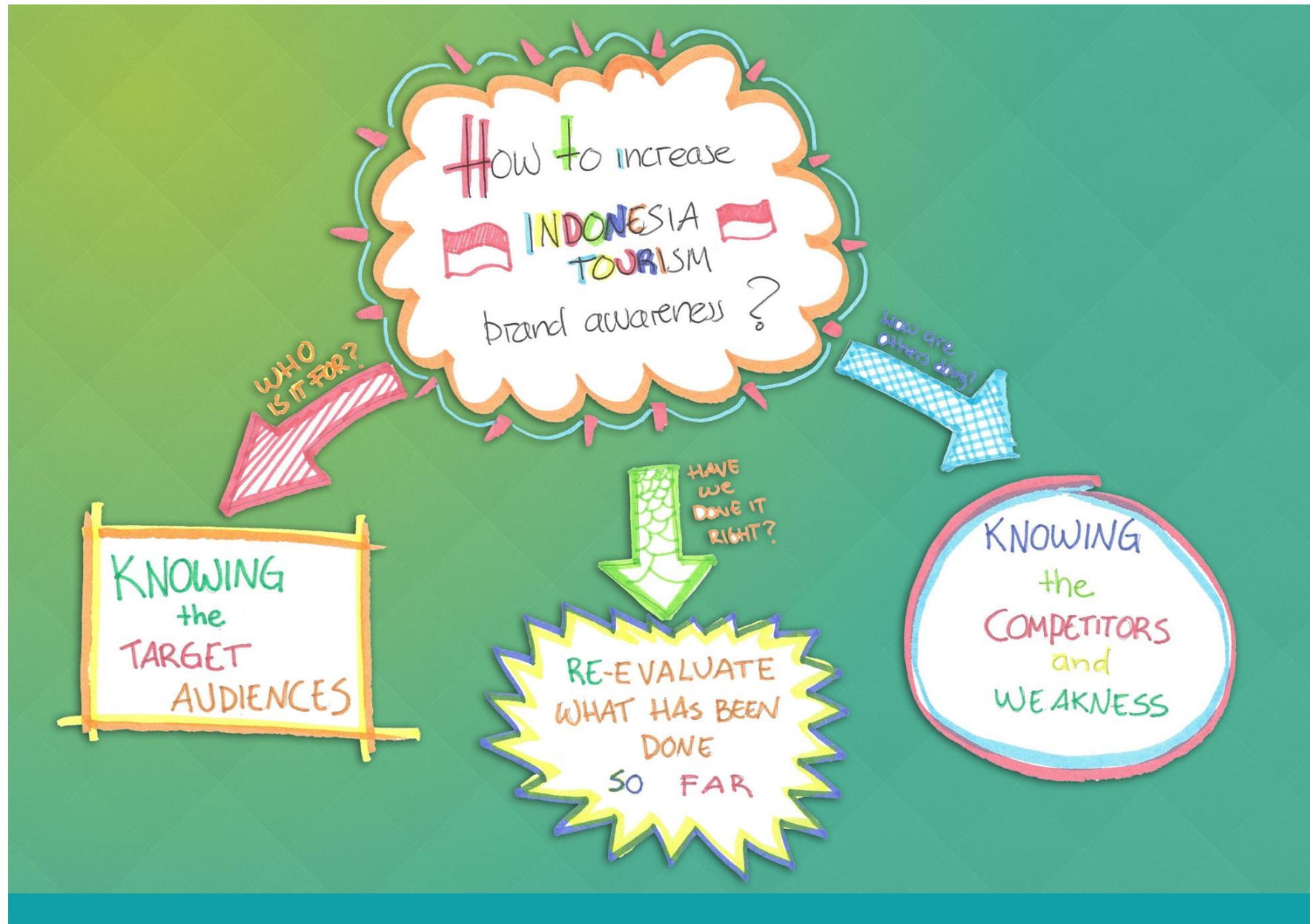
Figure 5. Strategy re-evaluation for brand awareness.

2.1.   Increasing Brand Awareness by Targeting a Specific Audience

Knowing the target audience is one of the critical aspects of creating a Human-Centred Design for the brand. There are different treatments and approaches to raising brand awareness for different target audiences. By empathising the target audience, I can personalise their characteristics, needs, and preferences.

Personalised engagement for this specific target audience can intensify meaningful experiences hence create a memorable and attractive brand as highlighted by a recent study. The importance of applying an attractive brand identity will trigger brand identification by customers[12].

This means that I must understand and find what is attractive to the target audiences. Donna Pendergast stated that multigenerational visitors characterise the tourism industry. This generational theory is a concept of portraying tourists into the year of their birth[13]. However, it uses a broad approach based on socio-cultural influences rather than on an individual focus.

The most recent generation completing its birth cycle is Generation Y, which consists of Generation Why, Millennials, and i-Generation. Their socio-cultural generation are influenced by the birth and advancement of the internet and alignment with the Information Age, which have affected their traits and their way of living; they are more focussed on brands, friends, fun, and digital culture[14]. They are the first generation born into the Information Age, and for this reason, they are known as digital natives[15].

The traditional approach to brand awareness, such as television, print media, and spatial media, are no longer practical. This generation is no longer familiar nor can allocate their time to stop and process information in stationary. They have new traits and

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[12] (So, King, Hudson, & Meng, 2017)
[13] (Strauss & Howe, 1997)

[14] (Pendergast, 2010)
[15] (Prensky, 2001)

characteristics, such as employing random access, play-oriented, connected, graphics first and multi-tasking.

Generation Y are connected users, who always have access to online information, online travel agents and social media. The top 4 of connected users are 65% of Thais, 65% of Chinese, 59% of Brazilians and 59% of Indonesians[16]. That is 804 million potential visitors and this market is just from the top 4 countries of connected users[17]. Imagine if I can utilise just 10% of that market which is 80 million compared to 11.52 million total visitors to Indonesia in 2016, it would have brought more significant economic benefits to the nation[18].

Summarising data obtained from the Ministry of Tourism Indonesia and Central Statistical Bureau sampled from 25,000 passengers who entered Indonesia, there are some interesting findings. The majority of tourists that come to Indonesia are in the age range of 25 to 34; both genders spend the same amount of money in shopping[19]. This data is aligned with the WTO conclusion that these travellers are a significant component of global tourism and a unique market that must be understood for its unique needs[20].

These characteristics among others are confident, relaxed, conservative and the most educated generation ever[21]. The prominent feature of these travellers are they also travel more often, explore more destinations, spend more on travelling if they find value, are hungry for information, hungry for experience and get a lot out of their travel[22]. With this data, I can shape and visualise my idea to focus on this target market for my project. I can create personas to map users' needs and characteristics.

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[16] (Carter, 2015)
[17] ("Countries in the world by population," 2017)
[18] (Kurniati, 2017)
[19] (Hidayah, Gede, & Amory, 2016)
[20] (Benckendorff et al., 2010)
[21] (Benckendorff et al., 2010)
[22] (Richards, 2007)
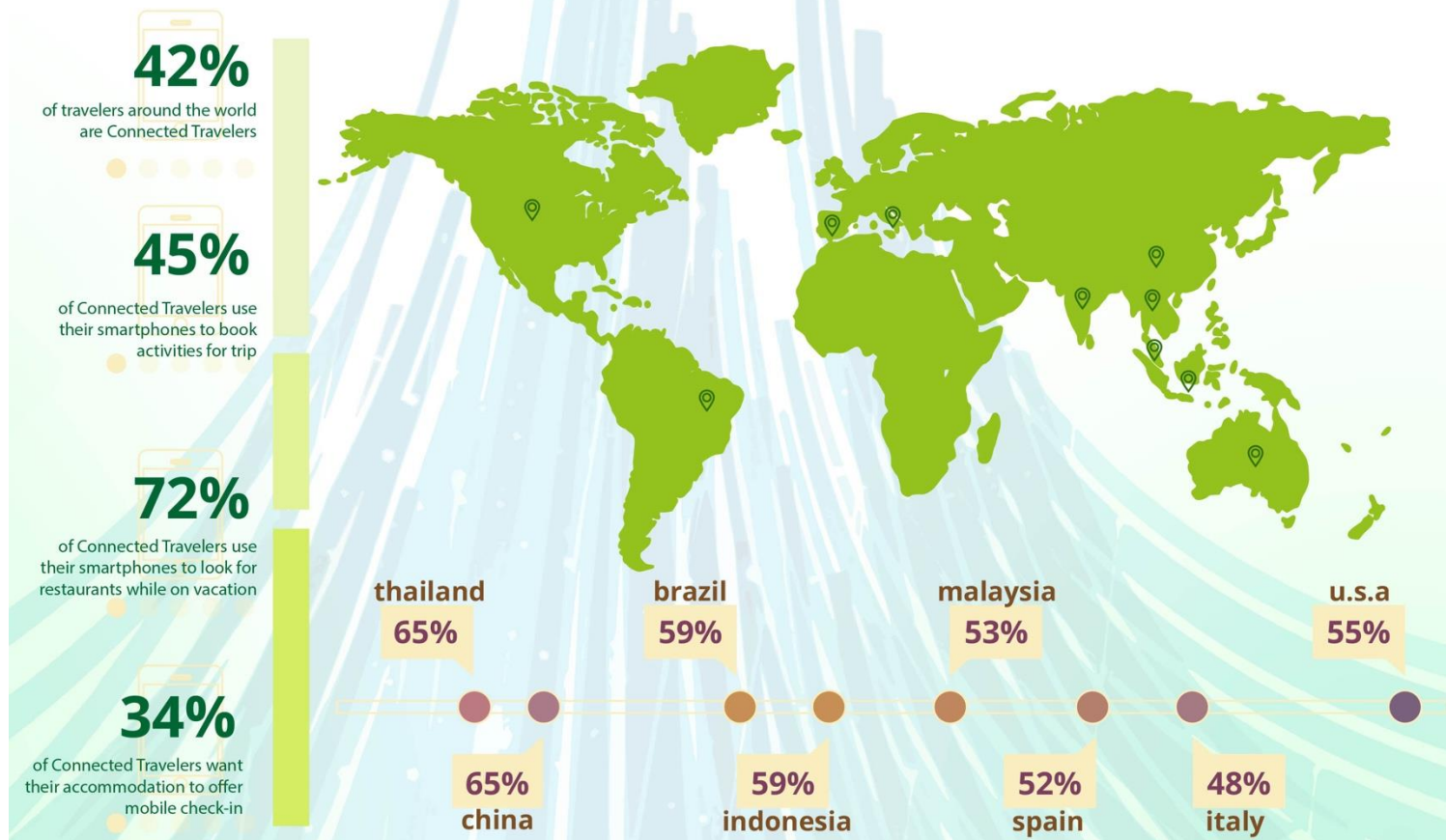
Figure 6. Infographic of connected users with data derived from a TripAdvisor report combined with Indonesia Tourism data.

2.2. User Experience Journey of Personas

Content creation and application design is a field where the product we create must be able to offer an engaging experience for the user. The User Experience designer, needs to visualise and convey the users' needs into the created product. It is a user-oriented service design, with the meaning that in the creation of our product we cannot just depend on what we want, but we must also empathise our product's users. In another words, we must apply a human-centred design approach.

To know how to design a product, first, we must understand the consumers about knowing the target audience and the characteristics of the users. However, if we accommodate the characteristics and needs of one user, this produces a product with too narrow a focus[23]. Understanding the limitation, we must approach the conceptualising with a more efficient and plausible method.

To understand and communicate, and efficiently design for a variety of users, I use personas. Personas are imaginary people created from hypothetical archetypes to stand for actual users throughout the design process with significant precision[24].

The creation and use of personas are a well-established research technique where rich set qualitative data is derived from a questionnaire, which holds quantitative characteristic information and synthesised into user archetypes[25]. Personas help to design a human and user-centred design rather than a self-centred design[26].

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[23] (Jacobs, Dreessen, & Pierson, 2008)
[24] (Cooper, 1999)
[25] (Madsen & McKagan, 2014)
[26] (Pruitt & Adlin, 2006)

2.3. Personas Creation

In defining and presenting personas, there are methods and model interpretations which will determine my accomplishment in analysing users' characteristics and their visualisation:

1. Each persona is described according to psychological, sociological, and ethnographical data.
2. Categorising several personas in the same structure to analyse their correlation with each other.

The examples above highlight the different properties of the personas and are summarised to function as follows[27]:

1. To personalise a generic abstract customer
2. To go further than targeting marketing by highlighting the variables and justifying the users' behaviour
3. To design with personalised users' preferences to satisfy all the users it represents[28]
4. To integrate consumer values in addition to their needs.

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[27] (Karwowski, Soares, & Stanton, 2011)

[28] (Goodwin, 2001)

2.4.   The Method

2.4.1. Data sources

The data sources that I use to create personas are from the American Journal of Tourism Management, the Journal of Tourism and Generation Y, quantitative data derived from interwebs, and data from the Ministry of Tourism Indonesia. From these data, I categorised and created two personas based on sub-groups represented by the results of data analysis. This least quantity (two personas) is recommended for them to be distinctive and memorable[29].

2.4.2. Processing the Data

The next process after data collection and initial research is creating an empathy map. This process functions to accommodate users' thoughts, needs and problems. The mobile application design approach is about addressing and solving problems, and empathy maps will clarify which problems to solve and how. With this process, I can visualise users' needs and can update the requirement quickly.

By understanding and empathising with the users, I can identify myriad needs of different archetypes. These different archetypes are then grouped into similar interests, and the character of the data with the result of two main archetypes. To further understand these archetypes' reaction and behaviour, I simulated them in a Customer Journey by using a mobile application.

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[29] (Blomquist & Arvola, 2002)

These archetypes then will be developed into initial proto-personas and re-evaluated to see whether it will fit with the users they represent.

Understanding the specific needs of the users can provide us insight on how to map users' experience journey. With this specific trait and habit, I will extrapolate the characteristic consensus for persona creation. This persona will be useful in simulating users' behaviour. With the similarities in users' traits and the country with a large potential market, I am using two inbound tourism origins of Chinese and Australian users to simulate persona[30]. I can assume an aggregate of users in a specific culture who share a common trait. Hence, a common collective persona can be created[31].

These personas of tourists' origins are very important. China is a growing market and has many potential new or returning visitors; while for Australia, Indonesia is one of the three most favoured destinations of Australian outbound tourism[32].

Characteristics of Chinese tourists as of 2014 were[33]:

- Younger generation.
- Having higher income and richer.
- More educated and sophisticated.
- They see the internet and social networking access as a primary necessity while often consulting friends for travel advice and using first-hand travelogues in blogs when planning a trip[34].
- Very demanding for high quality and attentive service.

However, Australian tourists' characteristics as of 2016 were[35] [36]:

- Have a high interest in the exploration of cultural differences and they like to be surrounded by different people, cultures, ideas, and lifestyles.
- Extroverted, spontaneous and enjoy the more exceptional things in life.
- Cultural habits triggered them to pursue experiences overseas.

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[30] (Hidayah et al., 2016)
[31] (Strauss & Howe, 1997)
[32] (Long, 2017)
[33] (Jian-jun & Nasolomampionona)
[34] (Jian-jun & Nasolomampionona)
[35] (Al-Hafiz, 2018)
[36] (www.Nielsen.com, 2015)

- They prefer to plan one long holiday overseas and they like visiting historical sites and museums.

- Heavy social media users and using them to interact with others and obtain information about the new product.

- Need detailed information for decision making.

The Generated Proto-Personas

ANDY LIU

Educated · Sophisticated · Determined

Goals
- Go travel after finishing business
- Indulge self with high class accomodation and experience
- Be the first between his peers to travel to an exquisite place and show it off on social media for his followers

Frustrations
- Having to find information,not in an easy,way and having to go to travel agents for overseas trips
- Although can read English but sometimes doesn't understand when it gets to complicated.
- Loves to travel but does not like to have little activities
- International travel app without his preferred language, Chinese

Bio
Andy is a young manager with above average income. Born in Auckland, but raised in Shenzen China, made him the first generation of his family born overseas. Being raised in a privileged household has refined his taste in travels and activities.

His work circumstances which requires him to be accurate and well informed has shaped him to become a well-planned decision maker. This characteristic also reflected his daily life. Everything must be meticulously planned, but when it comes to planning his vacation, this habit is inconvenient.

He must visit a travel agent to obtain full information and plan his trip. However, in the light of a recent unfortunate event, where a travel agent misplaced his booking and provided him with obsolete information on his trip destination, has made him very cautious about further use of travel agents. Now he prefers to use interwebs and travel forums to find information for his trips.

"I want someone to give me information on places before I go travel. And I need them now ! I want to go to vacation after this business done "

Age: 35
Work: IT Company Business Manager
Family: Married with 2 children
Location: Shenzhen, China
Character: Educated, Sophisticated and Demanding, Narcisstic

Personality
Introvert — Extrovert
Thinking — Feeling
Sensing — Intuition
Judging — Perceiving

Motivation
- Incentive
- Fear
- Growth
- Power
- Social

Brands & Influencers
VIVO
SHANGHAI TANG
上海滩
Audi

Preferred Channels
- Traditional Ads
- Online & Social Media
- Referral

Figure 7. Persona created from Chinese tourists' characteristic

JANE SMITH

Educated   Sophisticated   Determined

Goals

- Long vacation after a year of work
- Learning others' culture to enrich her experience
- Trying new things and unique experiences in her travel to remember them
- Having free time to be able to travel new destinations

Frustrations

- Spending too much time finding travel destinations caused by undetailed information
- Having to repeat what she said to non-English speaking population because of her heavy accent
- Doesn't know where to go or what to do for engaging activities
- Insufficient news feed or information on her travel location, after all, she needs to know what is going on

"Where can I get memorable experience? I want to understand more about your culture! Look at this glorious foods! Better share them for my followers to see! "

Age: 25
Work: Website Developer
Family: Single
Location: Sydney, Australia
Character: Educated, Sophisticated, Easy going, Well connected

Bio

Jane has just finished her education as a programmer. Currently, she is working at a Web Developer company as a front-end programmer. Due to her sophisticated position, her income enables her to indulge in overseas vacations. Born and raised in Sydney, Australia, she has never left the country previous to her employment.
She loves to travel, especially if it involves memorable and meaningful activities. She values her friendships with her peers, loves to share information and photos of her activities, but also she needs quality personal times.
Her connectivity to the world wide web makes her a very active, technologically savvy, assertive, and independent individual.

Personality

Introvert				Extrovert
Thinking				Feeling
Sensing				Intuition
Judging				Perceiving

Motivation

- Incentive
- Fear
- Growth
- Power
- Social
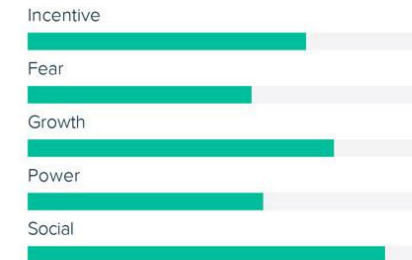
Brands & Influencers

SAMSUNG
BEC + BRIDGE

Preferred Channels

- Traditional Ads
- Online & Social Media
- Referral

Figure 8. Persona created from Australian tourists' characteristics

These charts reveal that there are specific needs that must be addressed, such as:

1. They need to find information efficiently but should also be adequate to make an informed decision, for example, the name of the places, activities, and easy access.
2. They need to be in control of the situation.
3. Must be accessible and understandable without a tour guide.
4. Can they communicate or interact with the online community?
5. Can they understand or gain the information from the online community?

A better way to define ideological beliefs is by using Maslow's Hierarchy[37]. Three major stages of the hierarchy are: basic needs, psychological needs and self-actualisation.

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[37] (Maslow, 1943)

CHAPTER 3.
The Journey:
Users' Motivation and Needs

INTRINSIC MOTIVATION

EXTRINSIC MOTIVATION

SELF ACTUALIZATION

- Need to share and update information on social media
- Adventure beyond the norm
- Authentic experience by engaging local culture
- The urge to do and try everything

- The app can provide once in a lifetime experience
- Integrated Social Media function
- The app opened up opportunity to explore and experience with the locals

PSYCHOLOGICAL NEEDS

- Want to enjoy the travel heartfully
- Want an immersive experience
- Want to customize experience
- Fully engaged in their adventure

- Engaging interactivity
- On demand activity suggestion
- Integrated features that make the app more useful

PHYSIOLOGICAL NEEDS

SAFETY

- Need to be able to trust the information
- Need a vouched travel destination
- Need to purchase things without fear of getting scammed

- Providing a certain way for an app to be trusted
- Curated and approved travel destinations

SURVIVAL

- To find updated information
- Need travel destination recommendation
- Able to booking reservations
- Continuous connectivity

- The app must be able to provide the info
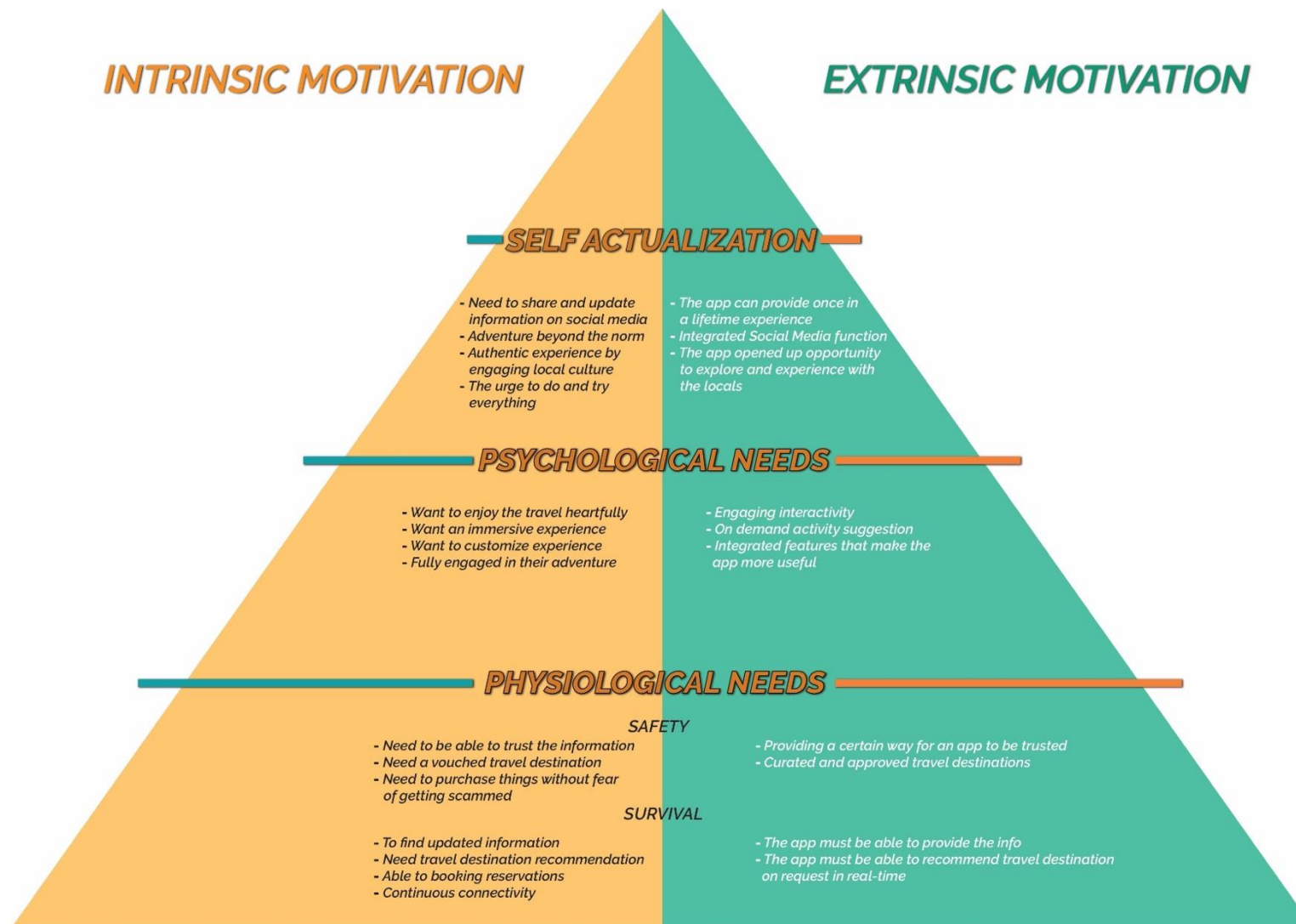- The app must be able to recommend travel destination on request in real-time

Figure 9. Maslow's Hierarchy of Needs, motivations that influence tourists

3.1. Changing and Motivating Users' Behaviour in Our Favour

It is possible to persuade and change users' favour by identifying their needs through Maslow's Hierarchy and application of the Four Pleasure Principles. Both are inseparable ideologies to understand people further. If properly applied, they can drive and help the user to feel more relevant to my app.

Patrick Jordan's The Four Pleasure Principle understood the most innate user's need. Physical stimulation of the five senses, social interaction, psychological fulfilment, and ideological needs, can be infused with Maslow's Hierarchy of Needs. By applying them to my created personas, I have simulated results based on each hierarchy:

1. Basic Needs

Andy and Jane want to safely plan their trip, knowing for sure that their needs will be fulfilled. Andy's experience of travel agent disappointment damaged his trust and required him to take the situation into his own hands, while Jane preferred online booking but was discouraged by inaccurate or obsolete information on travel destinations. This decision making can only be done with adequate information. Andy and Jane want an application they can trust.

2. Psychological Needs

With the fulfilment of their basic needs, Andy and Jane want quality content that can enhance their positive experiences and interactions. The content must fulfil their inner satisfaction and bring enrichment to their lives. As he is an experienced traveller, he tends to make spontaneous, unpredictable decisions concerning travelling but influenced by external and internal motivational factors.

On the other hand, Jane's psychological fulfilment starts with the simplest thing. She is a more visually driven user. Her satisfaction and fulfilment started from the appeal and the

beauty that attract her eyes, such as the beautiful and engaging visual design of the app. Therefore, they need an app that appeals to them and produces up-to-date information.

3. Self-Actualisation

This is the highest tier of Maslow's Hierarchy. Andy has full authority on his trip. Travelling is part of his life and demands a meaningful experience with existential authenticity. He will go to great lengths to have full contact with cultural and living experiences. He is motivated by a demand for self-development, self-expression, and self-exploration. He is willing to do activities that will enrich his experience, and he will post these and let others know about his experiences through social media.

Like Andy, Jane also loves travelling but the emphasis for her is more on adventure and understanding cultures that are different from her own. This diversity astonishes her, and she is very assertive in her action to the point that she wants to experience it by interacting and doing activities with the locals.

By understanding the self-actualised tourists from Maslow's Hierarchy, I can rationalise an idea to offer better service and use Fogg's Behaviour Model to entice them.

3.2. Journey Mapping

Journey mapping is a relevant way to achieve proper measurement in studying what the personas are feeling and needing. It is essential to understand how customers experience the journey of knowing and using our product. By mapping their journey, I will simulate Andy and Jane's interaction started from finding a proper app to the point they use it.

3.2.1. Initial Touch Point

1. Find information on the trip application.
2. Install one of the applications from the application store.
3. Ability to select the preferred language.
4. Do a quick interface test to find whether it is suitable for them.
5. Find out that they can search information instantly prior to registration.
6. See information displayed about customers' preferences.
7. By selecting one of the search results, users are taken to the detailed pages and advised on possible similar activities or places, with direct links and buttons to book.
8. Feel happy with the interface looks and interactivity.

3.2.1.1. Users' Thoughts and Feelings

Andy and Jane found some mobile applications. He will compare what is suitable to his needs and give more added value, while she decides to try the app based on how attractive the app looks.

The information is obtained from the search engine, forums, or their friends' suggestions. When they interact with the application for the first time, they will go straight to assess the app whether by searching the information or by how the app acts. This is a crucial moment. Most users would prefer to skip the mandatory registration prior to use, especially for users who only want to test the interface, and to evaluate their need for the app. Many of the users uninstalled the application if they are given such treatment.

On the application design, in the beginning, it displays a search bar. However, to search for something, Andy and Jane need preliminary information; they want to know what are the options that are available. Here I can list some of the recommendations. For example, Andy loves to do activities,

and there are several near Andy's trip destination. He can compare what the activities involve, whether there is a relaxing view sightseeing or adrenaline pumping base jumping.

Overall thoughts and feelings were positive.

"I can browse beforehand to make an informed decision whether I will use this app further. No prior registration! And I can change it to Mandarin! Yay!" – Andy

"Wow, it is so cute!! I like that it gives me information in a way that is very cool and I love how it looks! It understands what I want! I must share this with my followers!" – Jane

3.2.2. Primary Touch Point

1. Further searching the places or activities.
2. Finding what they are looking for.
3. Searching for more complete information generated by other users.
4. When the users confirm the places, the app will offer specific activities, direct them to bookmarked places and activities. Something added to meaningful experiences and motivation to do the activities are appreciated.
5. Moreover, at the completion of the selection, the users will be directed to the bookings site for transportation and lodging.
6. These bookings for lodging and on-site transportation with tour guides are complex information so this app will generate a personalised itinerary.
7. Users may need something to help them with this itinerary.
8. After the trip has ended, the app will give a mark of accomplishment, such as a digital badge or a voucher for next use.

3.2.2.1.   The Users' Thoughts and Feelings

Andy and Jane will need to be provided with detailed information pages on places or activities, reviews from other users, and the application environment. This action should be provided instead of opening another browser or search engine to find more information.

If the necessity arises, it will also have forums for more interactivities with others. The forum contents will be user recommendations, questions and answers, and tips on the destination on what to do or not do.

Andy and Jane will need a means to ease the complexity of remembering selected activities, which can be provided by reminders before the activity begins. This activity reminder will be given in-app or by text messages depending on the users' preferences.

Overall thoughts and feelings were positive.

"I can select and received suggestions on activities, and also can manage my time on vacation effectively!" - Andy

"It has connectivity to social media to inform and showcase my vacation to others. And freebies! I love freebies!" -Jane

3.2.3. Secondary Touch Point

1. The users will be reminded of their trip by showing in the app, notification of the places visited, photos taken and other users' photos.

2. The feeling of satisfaction in sharing the journey with the app. Andy and Jane are happy with the service and it helps that they were provided with meaningful experience.

3.2.3.1. The Users' Thoughts and Feelings

I will use gamification to increase the user's immersive experience, where users can upload pictures they have taken and share it with social media for up-votes, or reviews on places and activities, and their activities in the forum can increase their user points and exchangeable for vouchers or something else. This hopefully will increase positive emotions and joyful memories.

By putting the users in control of the situation, they will have the choice of their decision which will generate a satisfying feeling. With the outcome of positive experiences, cust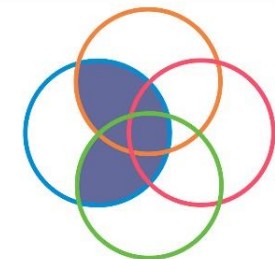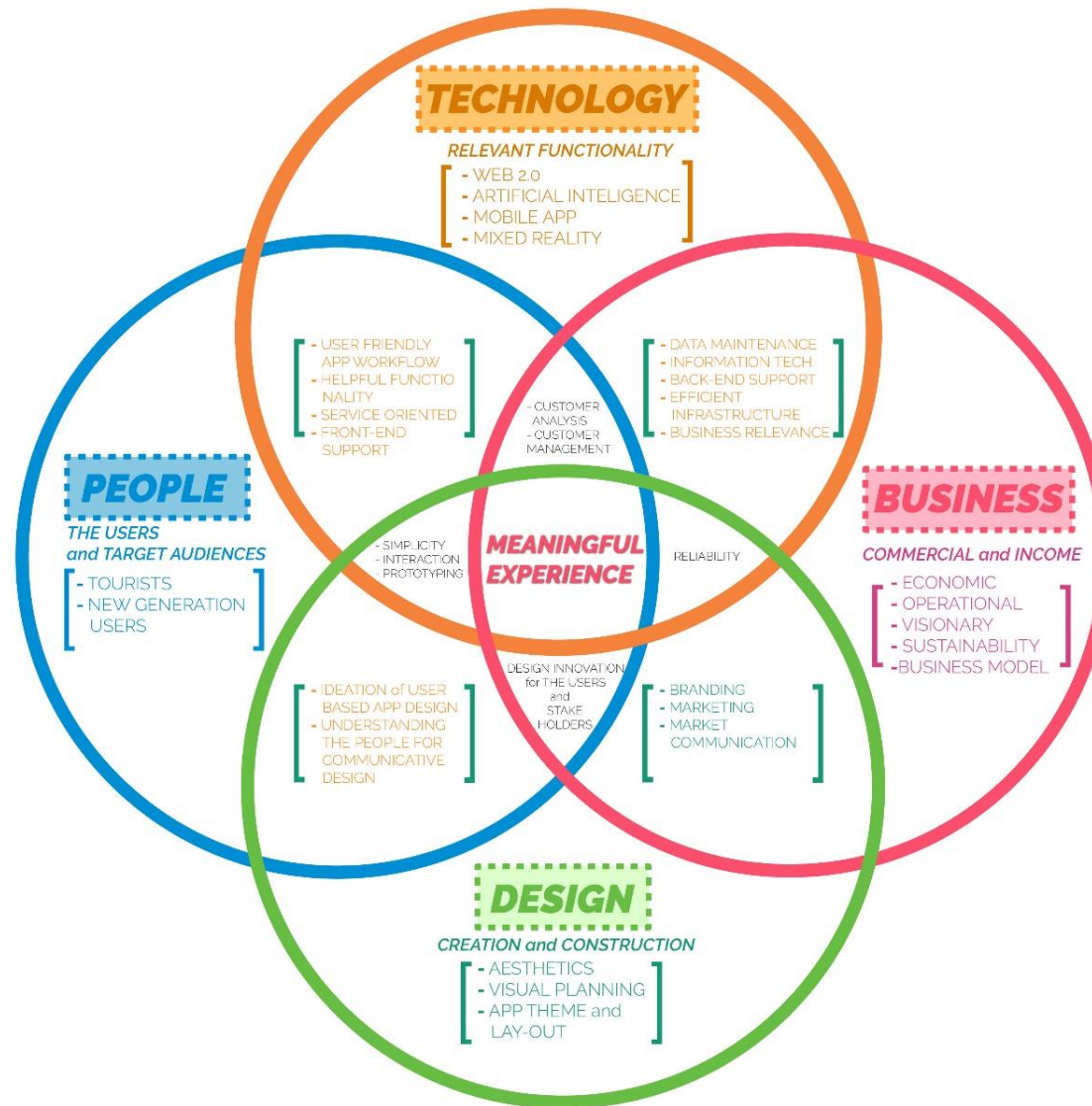omers will have a positive memory. Moreover, in the end, it will create loyalty for the brand. A satisfied customer will generate positive reviews and generate word of mouth promotion.

"If you do build a great experience, customers tell each other about that. Word of mouth is very powerful" –Jeff Bezos.

CHAPTER 4.
Meaningful Experience: Designing a Desirable, Viable, and Feasible Product
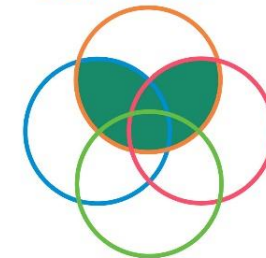
HUMAN-CENTRED DESIGN

TECHNOLOGY

RELEVANT FUNCTIONALITY
- WEB 2.0
- ARTIFICIAL INTELIGENCE
- MOBILE APP
- MIXED REALITY

PEOPLE

THE USERS and TARGET AUDIENCES
- TOURISTS
- NEW GENERATION USERS

BUSINESS

COMMERCIAL and INCOME
- ECONOMIC
- OPERATIONAL
- VISIONARY
- SUSTAINABILITY
- BUSINESS MODEL

DESIGN

CREATION and CONSTRUCTION
- AESTHETICS
- VISUAL PLANNING
- APP THEME and LAY-OUT

- USER FRIENDLY APP WORKFLOW
- HELPFUL FUNCTIONALITY
- SERVICE ORIENTED
- FRONT-END SUPPORT

- DATA MAINTENANCE
- INFORMATION TECH.
- BACK-END SUPPORT
- EFFICIENT INFRASTRUCTURE
- BUSINESS RELEVANCE

- CUSTOMER ANALYSIS
- CUSTOMER MANAGEMENT

- SIMPLICITY
- INTERACTION
- PROTOTYPING

MEANINGFUL EXPERIENCE

RELIABILITY

DESIGN INNOVATION for THE USERS and STAKE HOLDERS

- IDEATION of USER BASED APP DESIGN
- UNDERSTANDING THE PEOPLE FOR COMMUNICATIVE DESIGN

- BRANDING
- MARKETING
- MARKET COMMUNICATION

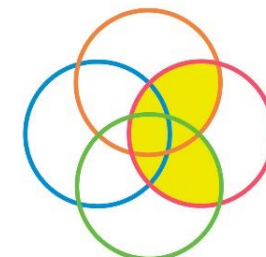*Technology, People, and Design govern the*
DESIRABILITY

People, Technology, and Business govern the
FEASIBILITY

Technology, Business, and Design govern the
VIABILITY

Figure 10. The Correlation and Interconnectivity between the DVF model and HCD

4.1. Desirability, Viability, and Feasibility

'Meaningful experience' are keywords for success or failure of a product design that is relevant in today's experience economy. There are several factors that have the roles to achieve this meaningful experience, which consist of coordination and choreography between four major elements: the people who are the target audiences; the design to accommodate the aesthetics and concepts; the technology to support the product; and the business to support the product's existence.

4.1.1. Branding as a Trigger for the Users' Behavioural Change

These mobile application purposes are to motivate people by showing them the beauty of a nation, offering an immersive experience within the app, while having the freedom without fear and packed with the adventure of a lifetime. However, this is not enough. I can trigger their interest and maybe their impulsive behaviour in using this mobile application if they are familiar with the brand. This has been shown by the Indonesian market as an example.

In Indonesia, there are two major competing brands of motorcycle, namely Honda and Yamaha. For decades Honda's brand was directed to and is known for its economical advantage, comfort and user-friendliness, and proven by an array of its products. On the other hand, Yamaha is known for its aggressiveness and race-oriented performance, which means less economic and less comfortable, also directly manifested in its product. This is a direct opposite of Honda's brand philosophy.

This affected the market very immensely, a market that for decades was familiar with this behaviour and experience. Users who wanted an economical motorcycle would directly decide on Honda without any consideration to Yamaha and vice versa. This branding was created from emotional experience and daily habit by design.

This showed that three components of Fogg's Behaviour Model, motivation, ability, and trigger, must be present to usher a behavioural change. If the users wanted to travel with many activities to do, they might have several optional places to visit. One of the deciding factors to make users behave is a trigger. Here I want to inculcate brand consciousness that Indonesia is the place for travel, actions, and adventures. By making the users to be reminded of the app that they can get unforgettable and meaningful experiences, I can associate Indonesia with the place to visit for that reason within their memories.

It is all correlated by knowing my customers, Human Centred Design, and Brand. A brand can only be effective if I know my target audience and incorporate it into the design as a holistic approach. Effective brand-building steps are needed to achieve this condition. My app needs an identity to increase the awareness and to increase its voice. Brand-building is an integral aspect of business development within the process of creating value for consumers[38].

Many elements of brand-building also correspond to approaches in human-centred design, because of their connected nature with the product and service continuum. These elements from the mind of Gregory (Gregory) and Powell (Powel) are:

1. Knowing your audience and market, and targeting them will make an effective brand.
2. Knowing your competitors and differentiating for a blue ocean strategy by adapting, overcoming, and improvising
3. Focussing on the qualities that make it unique
4. Standing out with great identity for exposure
5. Personalising the brand.

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[38] (Powel, 2017)

4.1.2. Designing an Alluring Product: Applying the Hook Model _____

Strong and consistent design of an app can make a product more appealing. It can be achieved by adhering to the following keys:

1. Trigger

An activity that can trigger the reaction of the viewer should be upfront. Besides the memorable action, this also functions as the user knows the product. There are different types to acquire this trigger:

- Unique contents and straight to the point function
- Promotion, press mentions and viral promotion to gain attention
- Word of mouth, users' testimonials from satisfied customers.

2. Action

The basic attractions for an act to occur are ease of performing an action and psychological motivation. They are influenced by time to complete, effort, cost, and social deviance.

Simplifying those factors will help and ease the users in performing an action.

3. Variable rewards

The product must have an ongoing degree of novelty to hold users' attention[39]. By gamifying my app, although the users can collect items, it is more of social rewards, and the feeling of peer acknowledgement. This can be gained through the activities provided, such as:

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[39] (Eyal & Hoover, 2014)

- Browsing through the search results, giving a sensation of a hunt and the feeling of satisfaction in finding what users are looking for.
- By involving themselves in shareable activities and uploading user-generated content, users can contribute to a community they care about. This action

- triggers the others to view and participate in upvoting the content.
- This will give the uploader a sense of accomplishment, an intrinsic motivation to gain competency[40].
- Collecting rewards, such as unlocking achievements and gathering items

4.1.3. Concept and Requirement Analysis

The research on multi-disciplinary studies involves understanding key points which would help to identify psychology and physicality of the app design. This understanding is needed because it will form a human-centred design philosophy, which is the main aspect for successful delivery of the value propositions that this project aims to deliver.

Art plays a key role in shaping both psychology and physical needs. In the interaction of my design, besides gamification to design

game-like features and rewards into my app, it must also include a strong emphasis in strategically educating the customer, "Customer is not a moron" – David Ogilvy. We must respect their value in knowledge and pleasure seeking. Therefore, my app must also include an educational value with the sense of entertainment.

There are many ways as to how to offer information on Indonesian tourism. It all depends on what purpose I might have and the necessity of the said information. The earlier concept of this

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[40] (Ryan & Deci, 2017)

application is how to help users make an informed decision and take control of their decision in the most meaningful and engaging way. This brings me to the idea of making the application that will cater to the users' needs.

A strategic approach to human-centred design from the aspects of Visuals, Human Science, and Technologies is required to fulfil users' needs.

1. Visuals

Implementing proper visual preferences of the final product by modernising the rich colour of the Indonesian scheme with a combination of trending colour scheme to preserve Indonesia's identity. This is to enhance the aesthetic value of the content display and emotion amplification through colour, tone, direction, proportion, and layout.

2. Technologies

Content creation without considering the feasibility of the proposed medium will create another problem. However, with careful planning and what the future will hold, my app contents consider the advancement of the technology.

Smartphones are evolving with expanding abilities in every new version. My content will utilise the Web 2.0 where connectivity becomes the leading edge of information distribution.

Shareable contents, connectivity with social media, and the emerging of Web 3.0 focusing on Artificial Intelligence will pave the way as to how my contents interact with the users. A deep learning app that can understand users' preferences and provide services accordingly.

This technology can also make the information delivery an enjoyable and meaningful experience. Augmented Reality of the travel destination, a virtual guide that understands the users, and integrated services are the added values that will make this application different, that is a means of education through entertainment.

3. Human Science

Human science is where all of the related aspects are connected, by understanding users' habits and needs. By understanding the Customers' Journey, I can find the gap that

the competitors have not yet provided, such as the ability to select a preferred language and interactive contents among others. However, the human science aspect covers more than just what the user needs. It is also on how the users interact with the app. In understanding the human aspect, I can anticipate the users' behaviour, which are uncovered through product testing.

4.1.4. Sustainability for Future Viability

The viability and sustainability of an app is what the current Indonesia's tourism app neglected to take into consideration. An app ecosystem is beyond the design. It needs a business plan to make the idea viable, that consists of who the key partners are that I can collaborate with. It will also need several actions such as:

- Key activities that will be provided by the mobile application content
- The value proposition that makes this application more valuable and beneficial to the users
- Customer relations that will add to the value of the application
- Key resources needed to make this application run logistically
- Channels on how this application or content will be distributed and accessed
- Revenue streams on monetising and making it economically viable.

Business planning can be done after I determine the core of the problem and empathise with the human elements of my product. Not only must I design the content and workflow with the users in mind but also with all who have a relationship with my idea.

In general, the relationships that surround my idea are the users, suppliers of the service and producers.

As this project has a wide range implication and involves the greater good of the nation, it will cast a wide array of the stake, such as I as the designer and conceptualiser, the Indonesian Government as the owner of the application, service providers, and the users themselves. It will also have economic benefit that develops the local economy by generating jobs in the tourism industry, which in turn will increase the nation's prosperity. This condition will be beneficial to Indonesia's image in general and local communities and local cultures specifically. With the increase in economic prosperity, it may improve the destination's condition and in turn will be beneficial for tourists.
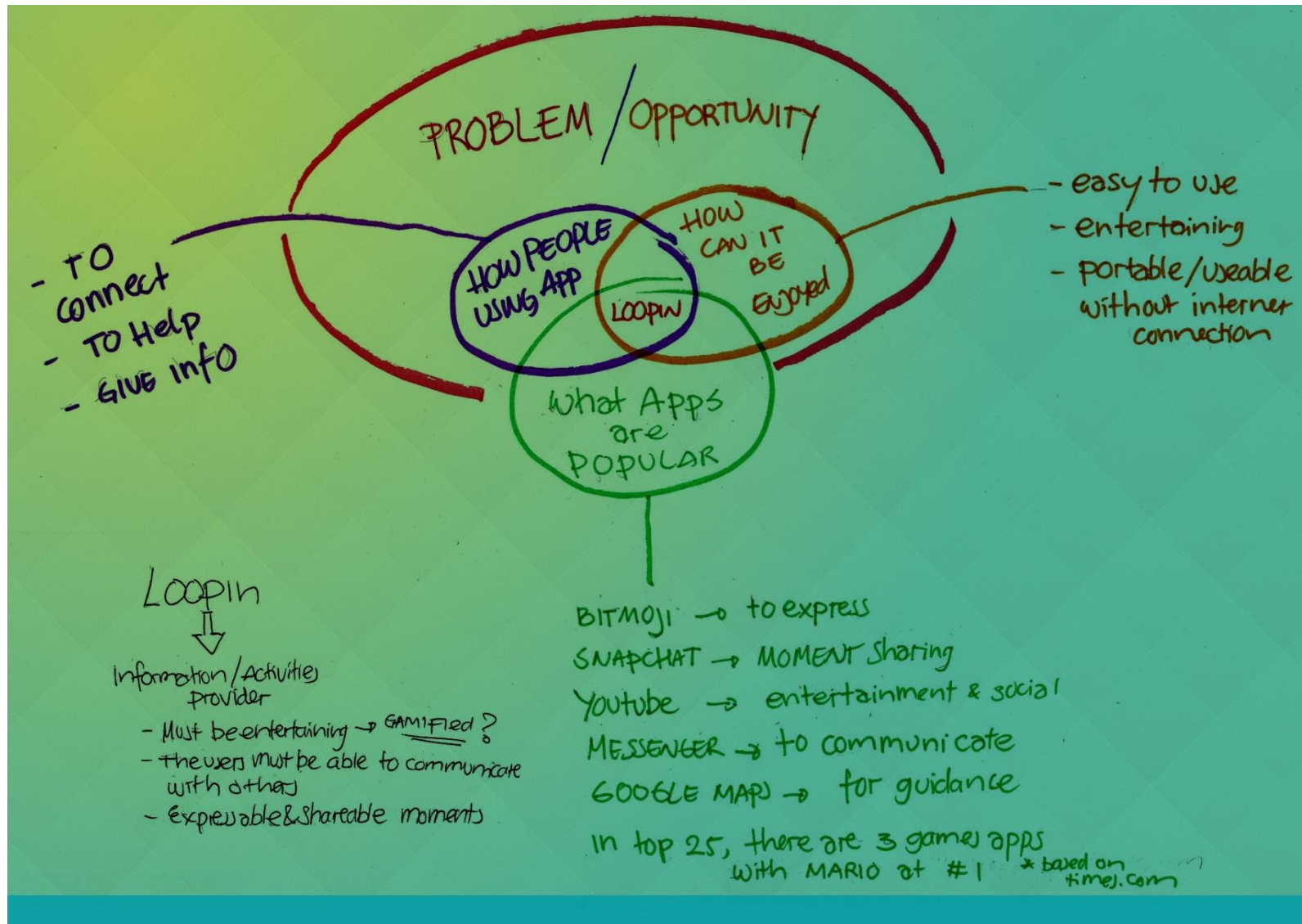
Connecting Ideas for an App

Figure 11. Thought process for what are the contents could be

CHAPTER 5.
Designing the Experience

5.1.   The Design Process

Visualisation starts with the setting up of the proper concept that corresponds to the desired theme within design corridors. These boundaries will govern the approach to determine the outcome. Such boundaries are:

1. A mobile app design that will be useful for the users.
2. Functions as a media to introduce Indonesia and its culture.
3. Create contents to attract users and differentiate from the competitors.

There are several steps which need to be done, and it goes as visualised by the figure below. By looking at the figure, I will show the flow of the design process globally.

This process can be worked in a non-hierarchical and transformational way during the process where there are some iterations and heuristic processes needed to achieve the desired product.

Although the processes as shown in Figure 12 in general are the current trend during my work experience, I have used it in this design project, I want to add another step that agrees with Natasha Jen's view. Natasha Jen argued that what is missing from the current design thinking process is the critique process, a criticism process of an idea for improvement and to evaluate whether the idea is valuable and good[41].

In its similarity, this process is true and tested based on my experience as a student and lecturer in a pedagogical system.

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[41] (Jen, 2017)

Thinking Process

DEFINING NEEDS
→ CUSTOMER JOURNEY
→ ACKNOWLEDGE PAIN POINT

TEST THE WORKFLOW

TEST AUDIENCES

EMPHATIZE USERS
→ CATEGORIZING TRAITS
→ PERSONA CREATION

IDEATE
→ SOLVE PAIN POINT
→ CONTENT CREATION
→ VISUALIZE

TWEAKING THE WORKFLOW

→ COMPETITORS
→ MOBILE APP DESIGN
→ TARGET AUDIENCE
→ BRAND EMOTION

SKETCHES
→ LOW FIDELITY VISUAL
→ LOGIC WORKFLOW

LITERATURE REVIEW

ITERATE
TO INFINITY & BEYOND !

CONCEPT
WHY? WHAT?
→ CORPORATE BRANDING
→ CUSTOMER SERVICE
→ CUSTOMER EXPERIENCE

PROTOTYPE
→ HIGH FIDELITY VISUAL
→ COLOUR COMPOSITION
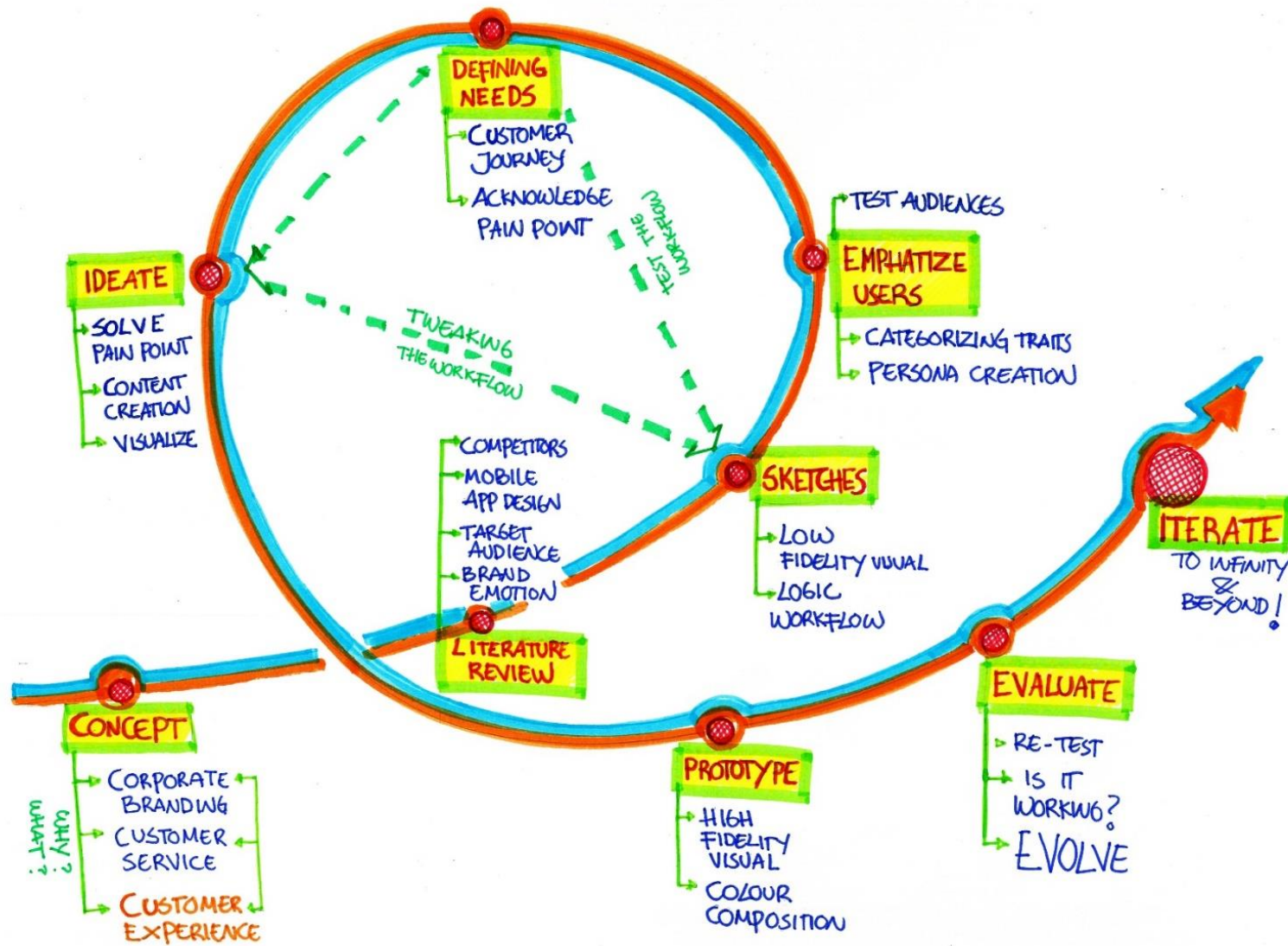
EVALUATE
→ RE-TEST
→ IS IT WORKING?
→ EVOLVE

Figure 12. Idea flow and iteration process

The professional field often misses the important critique step and goes forward with the assumed concept.

The critique process is needed to be done with inputs from a multi-disciplinary colleague, to expand usable ideas and to test the concept. With design critique, I can have an early understanding and as a mean to gauge potential users' reaction even before moving forward to prototyping. The critique step is needed before we explore deeper into conceptualisation on evaluation.

This criticism process will help the project to develop with the maturity of the concept and ideas consensus hence making the product testing more effective. By doing so, I learned how to define the needs and constraints of this project
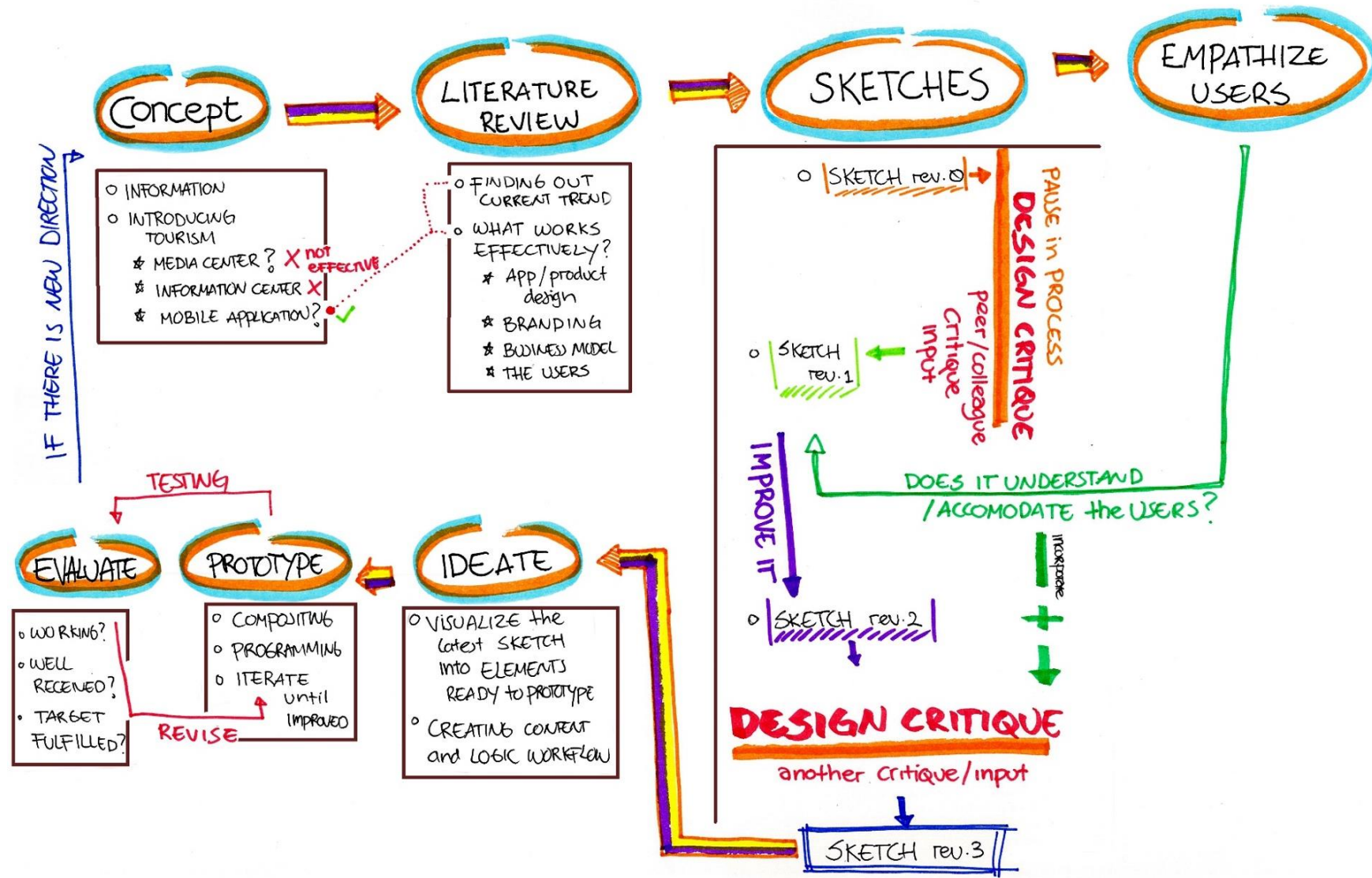
Research and design process

Figure 13. Personal process workflow for the app design

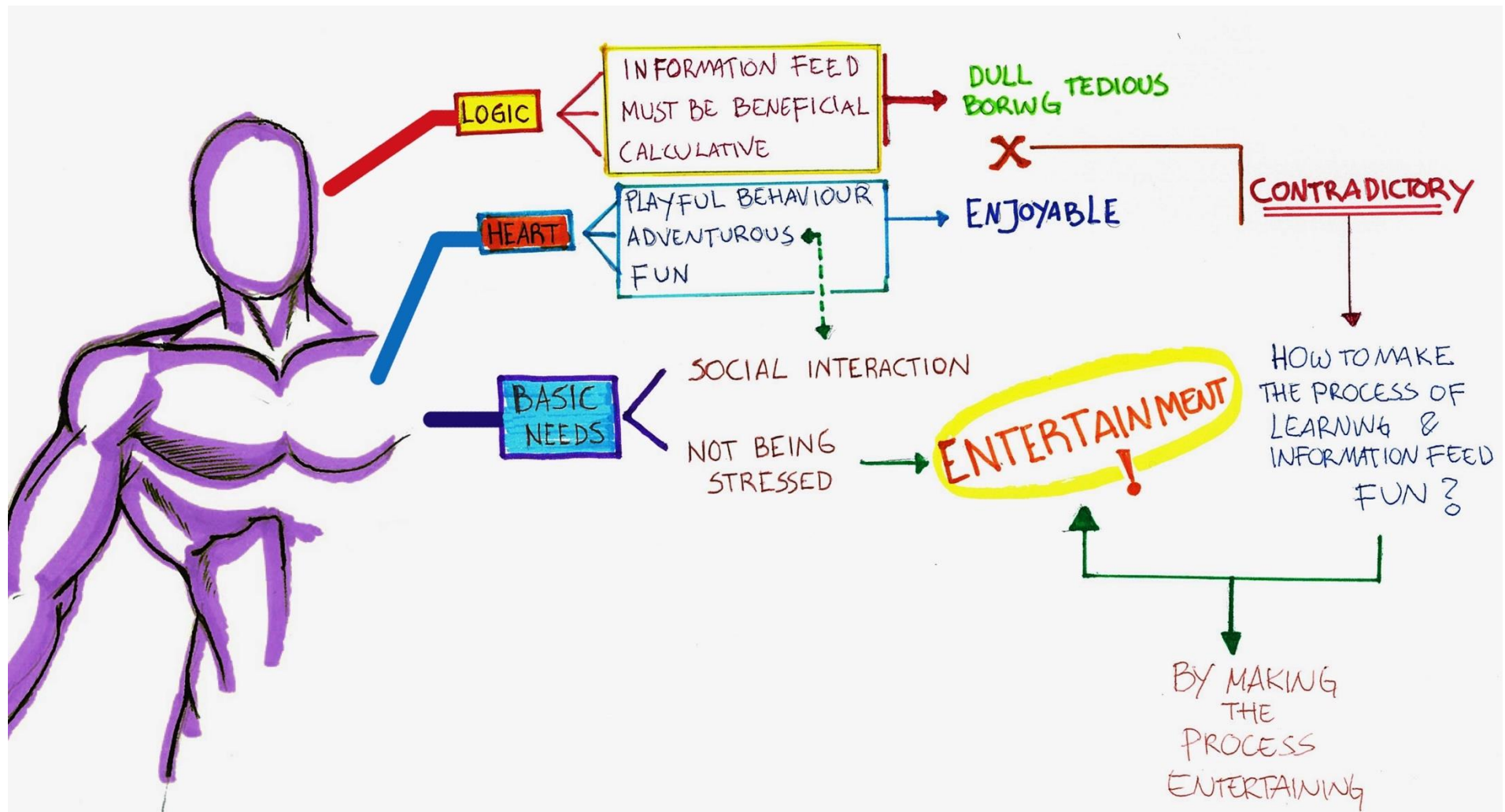# Thinking and Learning Process

Figure 14. Thought process on how to make the learning process fun.

5.2. The Symbiosis of Edutainment, Gamification and Technology

Introducing new travel destinations to tourists who previously were unaware will surely need substantial information processing and memorising. This process and action will result in a tedious chore for them. To some of the tourists, they might feel overwhelmed and might think that there is no purpose in knowing and understanding a new destination. Mostly they would prefer to go to mainstream and well-known places. This will cause a popular destination to increasingly gain visitors to the point of high saturation point, while a less or unknown destination is not gaining enough exposure.

The information distribution can be an educational platform for tourists, especially the ones who want to engage in new activities or discover a less known destination. However, the process of discovering and educating are not without their weaknesses. It is very tedious to find and filter the information, which is a debilitating point. Humans are a creature of comfort who love routine. Learning something new means that we are leaving our comfort zone, leaving our regular and predictable routines in the fear of uncertainty and the unknown. Although habits help us to work efficiently, breaking them needs a great effort[42]. A workaround that can trigger the tourists to willingly and happily perform this tedious process must be introduced.

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[42] (Ersche, Lim, Ward, Robbins, & Stochl, 2017)

5.2.1. Edutainment, Education with Entertainment _____

The process of new information acquirement often relates to education, especially if it involves a specific kind of attribute, namely travel destinations and their features. This cognitive process should not take place in a formal or serious environment. Our mind and ability to remember increase significantly if an incentive is introduced. This incentive can be in the form of entertainment.

Incorporating wholesome entertainment with the acquisition of knowledge at the same time will trigger a meaningful experience. Information gained through a process that a person is willing to do most often will be remembered and ingrained for a long time.

This edutainment can be very effective by introducing a higher engagement level. Edutainment is defined as the new technology of real learning which is focussed on a methodical understanding of the game and gaming technology[43]. The primary motives of edutainment are fun and learning, which may help the users to overcome their fear and step out of their comfort zone to indulge in interactivity.

5.2.2. Gamification and Technology _____

The gaming element supporting content for the education and entertainment is very important. It can trigger competitiveness, participation, and engagement. Using the emerging technology, I will use gamification to increase user immersive experience. It will allow the users to create their personal journey, upload the pictures they have taken and share it with social media for up-votes, or

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[43] (Anikina & Yakimenko, 2015)

reviews on places and activities, and their activities in the forum that can increase their user points and be exchangeable for vouchers or something else. This hopefully will increase positive emotions and joyful memories.

5.3. Increasing User Experience: Designing an Effective and User-friendly Mobile Application

In designing an application, several things need to be considered to make its purpose effective and efficient. Closely related and profoundly affected by human physiology, these things are imperative in the process of imprinting the efficacy of the product.

5.3.1. Making the Users Aware of All the Choices

The human mind always perceives and reacts to the owner's expectations. This action will be decided by experience or by our habits, which means that people often do what they are accustomed to do even though there is another instruction to perform. This is an act called perceptual filtering, where the users focus on what they are looking for and disregard other information that is irrelevant to them based on earlier experiences[44].

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[44] (Jackson & Hogg, 2010)

Although this habit must be taken into consideration when designing an app, I can train or induce new repetitive information to create a memory pattern for the users. We can create a visual, make a page, no matter if it is irrelevant to users' search, but it still catches their attention. This will open new possibilities for getting attention to other contents that may be relevant to the users' choice.

Some ideas to achieve this is by using different visual intonation, such as standing out information. For example, in the search results, our vision is optimised to see the structure. This is where the "sort option" comes in handy. When the user inputs a specific keyword, the results that are displayed will always relate to the typed keyword. Moreover, if a result already represents the purpose of the search query, many users will disregard the rest of the search results.

One or more secondary pieces of information should be added to those search results to pertain to longer and content filtering. For example, a rating system, distance from the current position or anything that piques the users' curiosity in relation to the content. Imagine when search results are produced and can give added value for the users to make an informed decision. By giving this information, they are subliminally comparing their first intention to optional and alternative contents

5.3.2. Structured Interface Design

Delivering this extra attribute in the search results, we must be careful with how they will be positioned. Our vision is optimised to see the structure[45]. This structure is studied and described by Gestalt Principles, which classifies the ways users react to the visual interface. With displayed information on the websites and mobile applications, without having a proper layout will clutter the visual space and will cause confusion or distraction for the users.

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[45] (Johnson, 2010)

The current trend is in using minimal distraction on the web or mobile app page for efficiently delivering the information with a clear message. This is especially important on a smaller screen such as mobile phones. This step must be taken because by effectively and efficiently displaying much information, users can utilise their limited time in processing the visual and interacting with the information to extrapolate the data to find what they are looking for from the content. We must take the attention of the users without flooding them with unnecessary visual distractions.

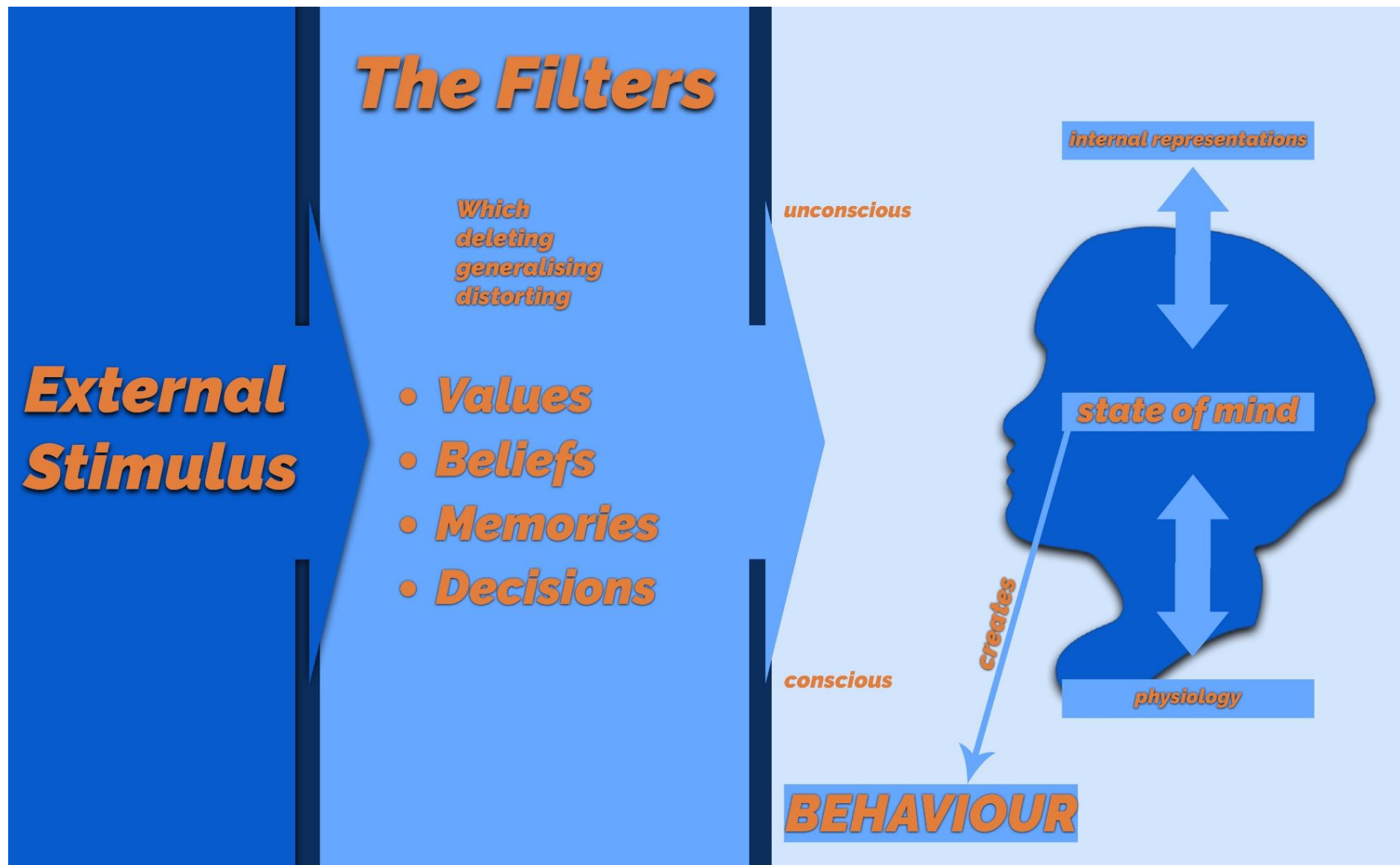## The App as Stimulus to Trigger Behaviour Change

Figure 15. Perception Filtering, adapted from themindacademy.wordpress.com

CHAPTER 6.
The Methodology

6.1. The Methodology

While I used qualitative methods, the main subject of this methodology is multi-disciplinary. It involves research of understanding branding elements, persona stories, Indonesian cultures, and interpreting tourists' preferences based on characteristics and traits for a human-centred design approach. These key points to drive my direction into forming the insight about the shared economy and services have been previously exploited.

I used phenomenology as my primary method for interpretation and supported by a literature review for data gathering, contextual interpretation for understanding the data, and heuristic trial and error design. These methods work together to inform my design and to ensure rigour of knowledge to create and visualise the mobile application that meets functional aesthetics, cultural and technological requirements.

Reflecting on the research aim, I have three primary objectives to accomplish, which are understanding the users, brand strategy, and app design. Therefore, the appropriate methodologies used are phenomenology, literature review, heuristic, and reflective practice which fit into the mixed methodological framework.

6.2. Questions and Applied Research Methodologies

These are the methods for the methodologies to understand the above issue, to capture information and address a solution corresponding to the research question.

Research Questions	Research Methods	Objectives
What are the potential visitors' emotional needs?	• Phenomenology • Literature Review	• Understanding tourists culture in travel, habit in social networking, and interpreting their needs • Defining the characteristics of the users by finding the target audience and current generation type • Creating proto-personas based on data extrapolated from findings

How is meaningful experience created?	• Phenomenology • Literature Review	• Understanding tourists' motivation for travel and find out what triggers them in deciding their destination or activities • Re-tell the tourists' perspectives and combine it with personal experience • Using personas to approach a human-centred design
Why is it necessary to build cultural brand authenticity?	• Literature Review	• Research possibilities of using the brand to trigger or change consumer behaviour
Was it effective for increasing awareness of Indonesia?	• Literature Review	• Using case study to compare and analyse competitors' advantages and disadvantages

What are the channels and contents to apply this knowledge that connects directly to the users?	• Literature Review	• Understanding the spirit of the Tourism Brand, and create a more focused purpose for the app content
How to apply this knowledge to something that connects directly to the users?	• Literature Review • Heuristic and Reflective Practice	• Applying findings for the direction and content of the app • Using the literature review to collect information on mobile application design • Iteration in design and compositing of the possible outcome of the interface and looks • Interpreting and anticipating the next trend for interface design

CHAPTER 7.
The Findings

7.1. Apps' Existence

There are many travel and tourism apps showcased in the App Store or Google Play. These apps have similar functions with undiscernible visual designs apart from their branding scheme. Apart from nation supported apps, there is no app for a specific region. For example, I did not see Trivago, TripAdvisor or AirBNB specifically created for Indonesia or Indonesian apps such as Traveloka, PegiPegi or others that cater to international tourists.

There are some problematic issues that occur in app creation and distribution.

1. If an app can only book or provide information without the added values, the user might just as well be using a web search or using popular apps. This condition must be addressed by adding certain value for my app to be successful and able to penetrate this user resistance.

2. In the distribution, or in how the users are aware and willing to download the app. There are hundreds if not thousands of similar apps that can cause a saturation point. The users need incentives to download the app or at least it should be useful for them. An app is for the users, not for the creator.

7.2. Apps' Purpose

There is nothing new in the way the apps present themselves in tourism promotion. This condition does not allow meaningful interactivity with the apps. This leads to a situation of whether the users can use Google Search for the information; why would they be bothered to download an app, let alone the necessity to install it on

their phone? It will only use up their phone resources, such as space allocation and data usage.

Despite all those drawbacks, mobile apps are debatably an effective way to promote tourism. It is a media that can directly connect to the user interactively and will serve perfectly as a brand frontline. Utilising it by targeting specific audiences can also increase a country brand awareness. After all, branding is the collective experience of users and can be augmented by consistently providing what the users want.

Thinking about branding, a product must be able to deliver its promise to the user while operating in a way that can sustain itself. It must adapt, improvise, and overcome its survivability for the future. This is where most apps fail, especially in Indonesia's case; there are many government tourism apps, nationally and regionally operated, but many of them did not survive and are neglected. However, this condition does not happen on commercially operated apps because of the way the apps are managed.

While the government operates tourism apps only to serve a purpose as a means of promotion, the commercially operated app must generate income for profit with a proper business model. If this type of management is applied to government operated apps, they can generate revenue to sustain the apps and may be even profitable as a national source of income.

7.3. The Target Users

1. Personas representation can be used to understand user behaviour.

2. The users act differently before and after the advent of internet access. Nowadays they are connected and use forums and social media.

3. Current customers love to use their gadget for social media and as part of their identity.

4. They have new traits and characteristics, such as employing random access, play-oriented, connected, graphics first and multi-tasking.

5. The current generation is an authentic experience-oriented user. They want to make the most of their travel and will go full length to experience it.

6. These users need to access information effectively

7. The character of tourists from the largest market, the Chinese, are younger, richer, educated, sophisticated, connected and more demanding

8. Although they speak English, most of them prefer to communicate in Chinese.

9. There are different degrees of knowledge among tourists in Indonesia.

10. They love to be engaged in activities.

11. Tourists aged 25-34 falls into the Generation Y category.

7.4. The Technologies

1. There are different types of phone, which means that there are many standardised settings from many different operating systems.

2. The hardware capabilities of these smartphones are at different levels, which means if a feature of the app requires certain capabilities that are not available on older phones, it will not be functional.

3. Users' permission regarding app features will also be a concern if they were not given.

4. Software limitations can hinder the app's creation.

CHAPTER 8.
LOOPIN:
Idea Visualisation

8.1.   It Begins

It all started from earlier attempts to improvise, adapt and overcome an already existing design and process. The similarities of the current app design in the marketplace, especially in information and services, are a culmination of research that focused on what works for the user.

In a process to understand and measure what works for my app, I tried to incorporate those existing design patterns and workflows. By doing so, I can understand and test what works well and how I can improve my design to be outstanding and diversified from existing ones.

Adding some specific features that are uniquely used in my app will certainly enhance the chance of being memorable. Designing an app does not just involve the visual aspect. Similar to other designing tasks, there are some aspects which must be fulfilled, especially when it is related to branding.

8.2.   Visual Branding, the Aesthetic Values

The ultimate purpose of branding is to evoke specific emotions and remembrance of my app for the customers by incorporating elements, such as the engagement of the users and the visual outlook.

However, the first aspect that affects the user emotions is the initial impression of the visual look.
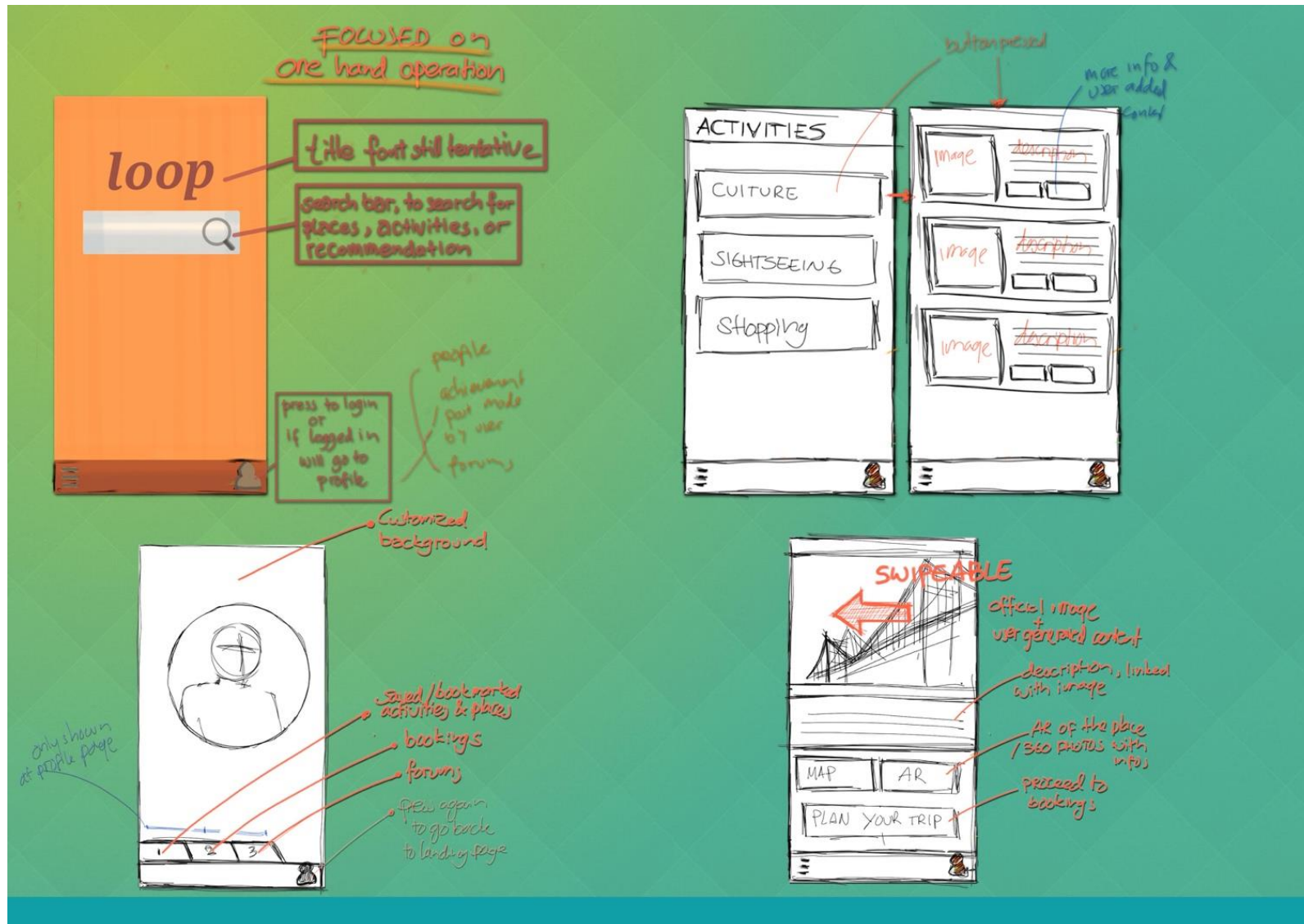
Figure 16. Some of the earlier attempt in user interface design

Imagine how often we favour the beautiful things even before we understand their effect on us. This is the first hook that may engage the customers to your product further. Although it is a superficial representation of the product, the users' experience starts with how they perceive our product.

There are guidelines and corridors that I must consider carefully in designing my app. The nature of the app's purpose is increasing brand awareness of "Wonderful Indonesia" requiring me to follow certain aspects of its identity, such as cultural references to name a few.

This is the silver lining that connects the visual identity of my app as a brand frontline with the freedom of designing an independent layout.

8.2.1. LOOPIN

I start my app design from the logotype and its colours, to define its further looks and composition of the content. The name of the app has been decided: "LOOPIN". The name meaning is to signify a looping never-ending journey through Indonesia. The design process started with sketching what the overall logo will be, and breaking it down to conceptual typeface.

Figure 17. Official Wonderful Indonesia logo hex colour Code for the app colour scheme

Figure 18. Earlier and sketch try-outs for the name logo

8.2.2. The Logo and the Title, the Identity Impression

The logotype designs were inspired by the natural elements combined with traditional shapes, such as Parang Rusak's batik pattern and infused with the defining edges of Rumah Gadang's roof architecture. The amalgamation and artistic representation of these shapes defined the edginess and roundness of my typeface and elements design.

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Figure 19. Batik Parang Rusak and Rumah Gadang

While the centre piece and the logo, the "O", were inspired from Gatotkaca's most significant visual identity, the wing. His flight ability makes him a very mobile character. A spirit that I want to partake of in my app's adventurous nature.

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Figure 20. Shadow puppet of Gatotkaca

After further iterations and compositing, I have the first visuals for rough sketches of the app's title design.
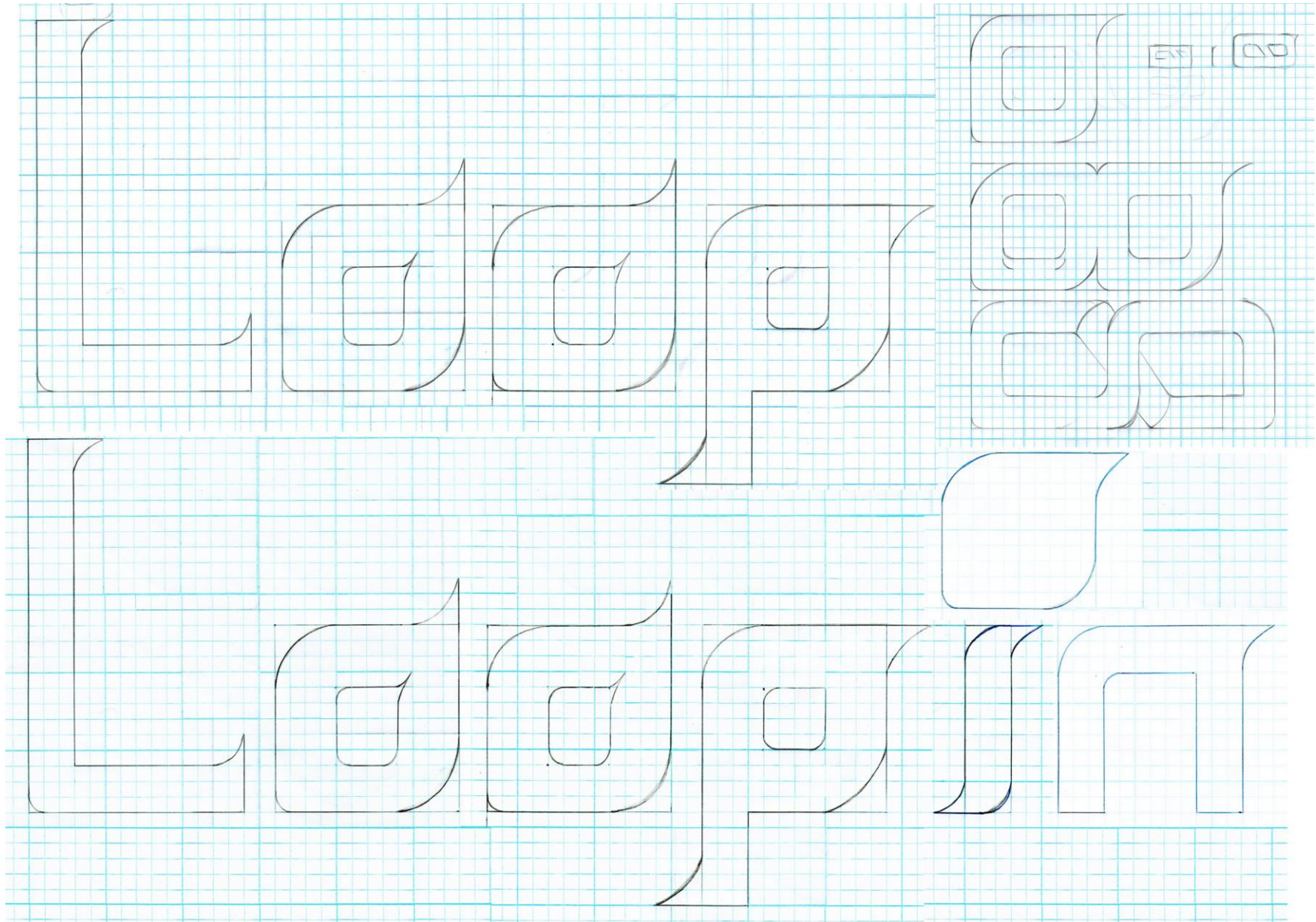
Figure 21. Further re-composition of the title logo.

However, with this design, during further observation and scaling down the size to emulate a smaller screen, the edge and direction of the type curvature did not translate the visual flow very well. It became too sharp and were not eye-pleasing, and the letters seem to stand individually. Using software to trace and modify the shape, I came up with a few alternatives, such as these:
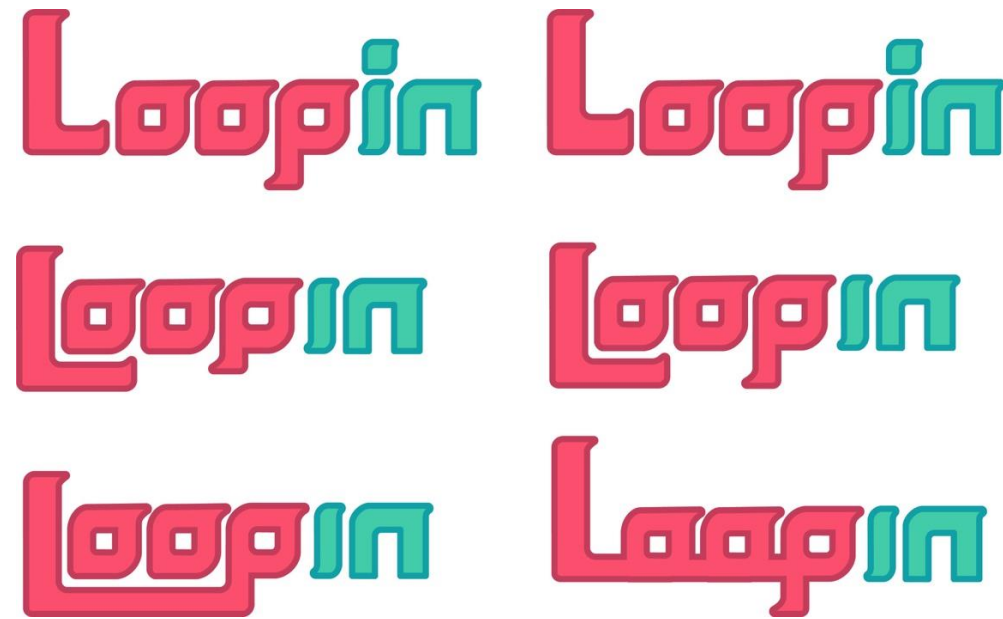
Figure 22. Attempted Loopin logotype iteration.

After some compositing and scale testing, I have come closer to the final logo for Loopin. The colours are a monochromatic derivative from the Wonderful Indonesia logo. Some adjustments are needed to fit the colour chart for the current trend in the mobile app colours palette.

FC4F6D   FC8F24   10A0A6   42CCA8

Colors grouping of the letters using Gestalt Principles, to drive users to read and acknowledge the shape in certain formation. The chosen colors are using extended palettes of tints and tones from the original logo colors scheme. These action was taken to be more accomodative for current mobile app color trends

Figure 23. LOOPIN logotype and icon.

8.2.3. The Mascot, Building the Trust

It is in the nature of human instinct to seek something they can relate to. Exposed to something new or unfamiliarity requires a safe feeling. This requirement must be fulfilled for a mobile application to reach the emotion and acceptance of the users.

Providing a face and embodiment to an app will give it an advantage in building trust and user engagement. It will help narrate the content and act as a guide, as evident in the recent study. Anthropomorphic brand mascots can emotionally engage, build trust and lower barriers to service engagement[46].

As for Loopin's mascot, I used local culture as the representation. In the early iteration, I used the Ondel-Ondel as the mascot representation of the app, but this posed a problem, because it had already been used as a mascot for Jakarta and has been used too many times.

I need something with more than regional influence. The next idea, I used Gatotkaca, a character in the Javanese literature of Wayang. Gatotkaca has the ability of flight with invincibility from any harm, which is quite representable as a guardian that can keep a person safe. I want to apply this spirit and ideology to my app.

As in the cartoon styling, I want to convey a less imposing loveable spirit that relates to all age ranges while keeping the identity intact.

---

[46] (Bennett & Thompson, 2016)

Ondel Ondel

Figure 24. Ondel-Ondel as the earlier idea of the mascot.

GALLIE

The purpose cartoonizing and character deformation is to make it less intimidating and acceptable to the masses.

Figure 25. Frontal view from sketch to coloured of Gatotkaca-inspired final mascot named Gallie.

Figure 26. Third-quarter view from sketch to coloured of Gatotkaca-inspired final mascot.

Gatotkaca in two different iterations based from area of origin.
The left is from Yogyakarta and the right is from Sunda's Wayang Golek

Figure 27. Action view from sketch to coloured of Gatotkaca-inspired final mascot.

8.2.4. Designing the App's Experience Journey, Capturing Authentic Emotion _____

Figure 28. Scaled-down full chart.
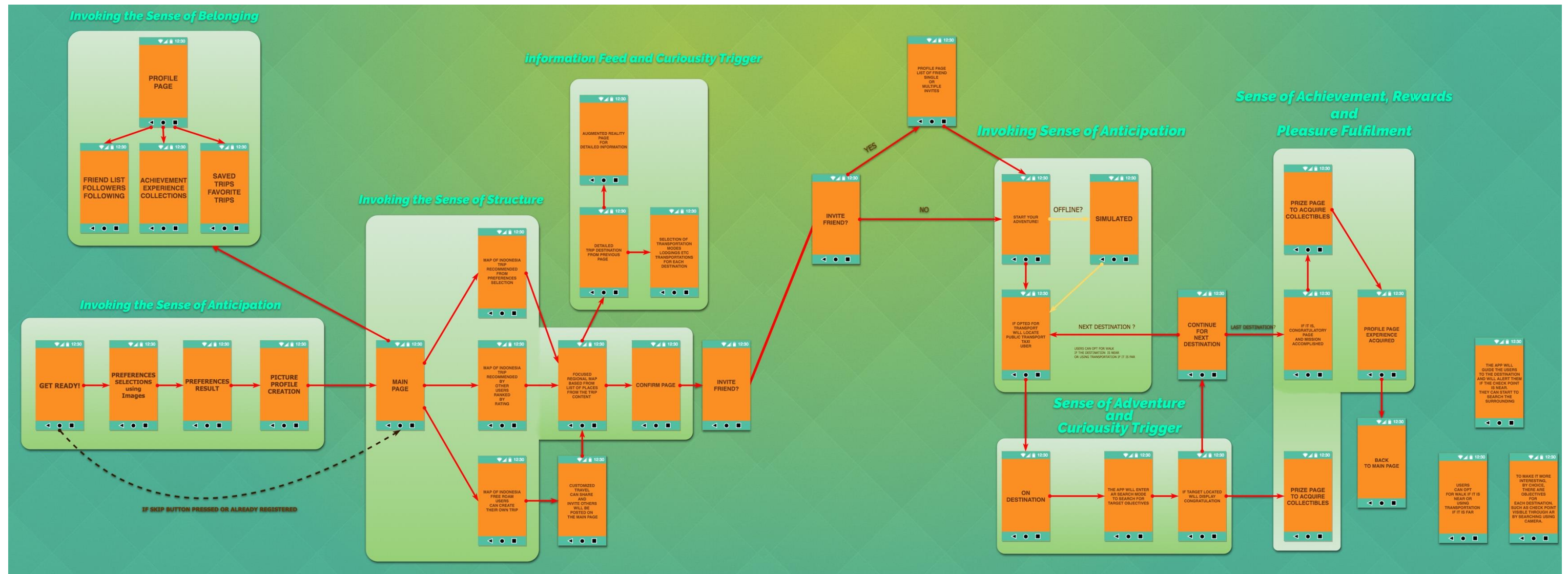
This Customer Experience Journey approach classified and segmented by specific touchpoint with the hope to achieve emotional triggers of corresponding parts

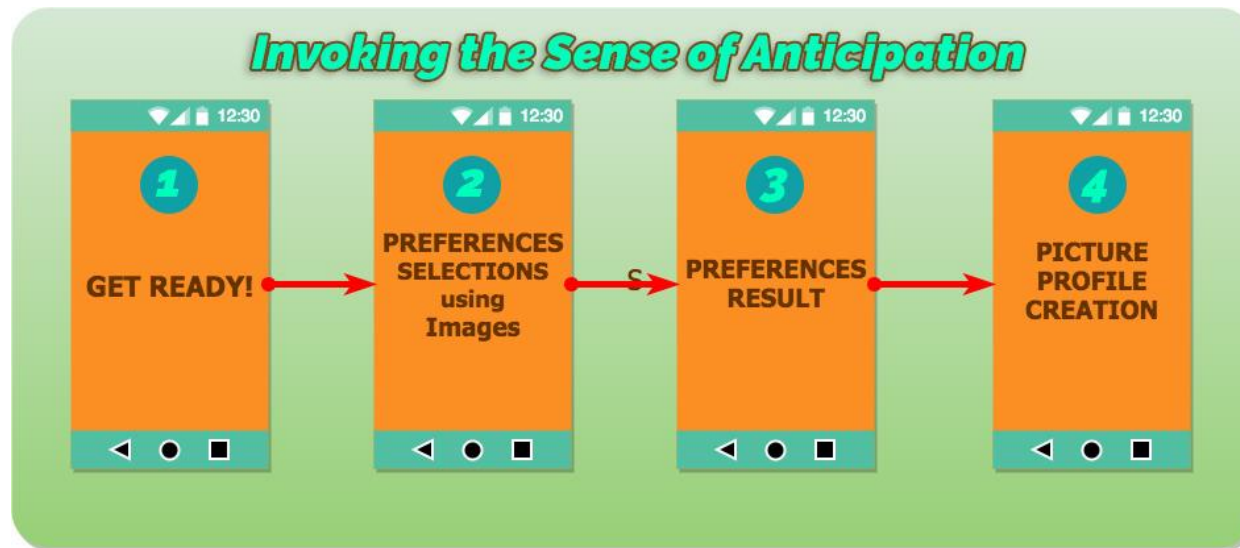### 8.2.4.1. Invoking the Sense of Anticipation

Figure 29. Starting Flow.

The first segment of the application aimed to invoke the sense of anticipation by preparing the users for the next action that is about to commence.
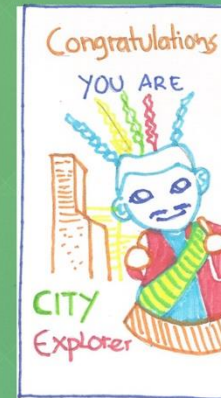
splash page
rev. 3.3

- this page started with showing off the "Loopin" and logo for repetitive awareness.
- the use of mascot is to Anthropomorphize the app. study shows this act will make the users feel closer and more personal

- there are two buttons in this page

HELLO will take the users to the next page, preference selection

HOME will take the users to the main page

RESULT PAGE

- this page is the result page generated from users input at preferences page
- what this page will do is defining activities that matched the users' preferences

- In the prototype stage it will simulate the users as 'city explorer' but on working

PREFERENCES PAGE
rev. 3

- This page will ask the users about their preferences.
- Preferences determination will be based on users selection on given sets of images
- in the full/final working version of the app, this page will use AI

- that generates and calculate users characteristics, similar to that of personality tests.

NEXT will take the users to the next page if they did not select any option

PROFILE PICTURE CREATION PAGE

- The users will be asked to have their picture taken
- By placing the face on designated area, it will be cropped and accesorised with interchangeable option

When this button is pressed, a pop-up secondary buttons will be shown. The users can select the backgrounds represented by the buttons to their liking

BACKGROUND   APPAREL   ACCESSORIES

Figure 30. Starting Flow sketch.

PAGE 1. START

get
ready

This is the start page with the splash screen "Get Ready!" to evoke a curious feeling and anticipation, continued with a countdown to enter the next page. There is also a button below to skip this process and go directly to the main page.

PAGE 3. PREFERENCES RESULT

YOU ARE
A
CULINARY TRAVELER!

This is the result page for users' characteristics. For example, if the user selected mountain for the place, food for activities with no travel companion, it will generate "Solo Culinary Traveller" as their title.

This will directly affect the generated results on recommendation, such as a culinary place that is located on the edge of a mountain far from city buzz and suitable for the person who searches for tranquillity.

PAGE 2. PREFERENCES SELECTION

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On this page, the app will try to determine users' preferences using a quiz. To make it more interesting and interactive, this quiz will utilise visualisation for multiple choice questions.

The visualisation will use images that relate to the questions asked. The questions are to determine three things which are a location by type (mountains, beaches or seas, and cities), activities (culinary, sightseeing, and adrenaline pumping or physical activities, such as hiking, or swimming).

The final option, who are the users' companions to join the activities (alone, with friends or families).

Figure 31. Starting Flow Low-Fidelity with earlier colour scheme.

This button functions to move between items. At first, these accessories only have limited numbers. However, with more complete activities, the library will increase ith collected prizes.

Users can have their photo taken. By placing their face on the designated area, the app can crop the image and substitute the body with pre-set images from the library.

The costumes and the accessories set are interchangeable by tapping the arrow button. The default selected set is defined by a preliminary destination selection, which in this case is Yogyakarta, so the costume shown is "Sorjan" and "Blangkon", the traditional costume.

On the proposed app, this background is a 360 degrees image, which can be angled by the phone position and movement. This will create many possible combinations of background shots even just from one image.

This is a trip destination selection, but just for the purpose of background and costumes for your profile picture. Although the initial selection is limited, the collection of selectable destinations will increase with more finished action/task done by the users.

Figure 32. Profile picture creation Low-Fidelity with earlier colour scheme.

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This background image is a phone-gyroscope activated. The angle of view will change based on the phone perspective. The image is a 360-degree surround image, to provide the immersive experience without being on the location.

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The users may tap anywhere to go to the next page,
The Language Selection.
Based on research, the users preferred their mother language.
This example is the Chinese

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When the preferred language is tapped, the interface will be translated into the selected language.

Using words and texts for preferences selection is a thing of the past. I use images not only just to make it more entertaining, but in the full version of this app will also using A.I. to understand the users' psychology. Utilising a phenomenon called Kokology*, the A.I. can determine where, when, who, and what are the users' destination and travel companion preferences.

This page will display the result after the users' preferences has been analysed. This page is important for ego boosting and sense of accomplishment by assigning an identity for the users. It is part of the reward for accomplishing previous pages tasks.

Figure 33. Starting flow prototype. Kokology is a study of kokoro, heart and mind.

The users will be asked to take a picture for their profile. By fitting their face into the guide, the app can calculate the image and remove the background. This action is required for the app to be able to replace the background image.

After the clean-up, the users will be taken to customisation page. Here the users can fit their costume, background, and accessories to their preferences.

Each button represents a type of items.
Just like the earlier concept, the background images are 360-degrees images. This means that the users can set it to their preferred angle, and since there are many possibilities, every picture profile created will be unique between users.

In the beginning, there is a limited number of items. But the users can expand their collection and acquire items through rewards given when they fulfilled specific objectives within the app.

For example, a background image will be unlocked and added to the collection just for finishing the profile picture creation. Or when the users completed "travel mission" when they visit a specific location

Figure 34. Profile picture creation prototype.

8.2.4.2. Invoking the Sense of Structure

Invoking the Sense of Structure

Figure 35. The flow of destination selection.

In the earlier concept, the selection page starts with island selection. When an island is selected, recommendations will pop up whether it was generated by the users' preferences, recommendations from friends, or if the users prefer to customise their destination.

Further inside the selected island, another region-based selection will pop up. It will have a similar flow to the previous page.

This page shows the recommended destination based on the app generating the users' preferences, The City Explorer.

The map will show highlighted locations of destinations, while the lower half of the screen will show abridged information of the place.

This page shows alternatives of recommended destinations based on app generated users' preferences and from friends, listings based on rank and votes.

This option is viewable by tapping the lower icon, should the users not be satisfied or prefer another set.

By tapping the message icon, the users can connect to others within the exploring team, or can communicate and interact with others within the local chats.

This is one of the ways to know and obtain information on what is going on. For example, asking for specific places, traffic information, what transportation should they take.

Figure 36. The earlier concept for the flow of destination selection.

adventure for you

This button will take the users to the page of recommended trip destination based on preferences quiz result.

create your adventure

This button will take the users to the page of Indonesia's map and can create customized adventure and define a preferred destination

adventure with others

This button will take the users to the page of adventure collection created by other users. They can use the preset or join the others.

adventure for you

create your adventure

adventure with others

adventure for you

Waterbom

Detail

Detail

This page contains a list of destination that automatically queried by preferences quiz. The trip destinations are listed, and the users can browse by swiping.
When the users tapped on a destination,
the map will zoom and focus on it.
For this example is the Waterbom.

Waterbom
Map   Detail

Tapping on the Map button will take the users to a detailed map location powered by Google Map

Waterbom
Map   Detail

Tapping on the Detail button will take the users to detailed information of the destination

Figure 37. Earlier Low Fidelity for the flow of destination selection.
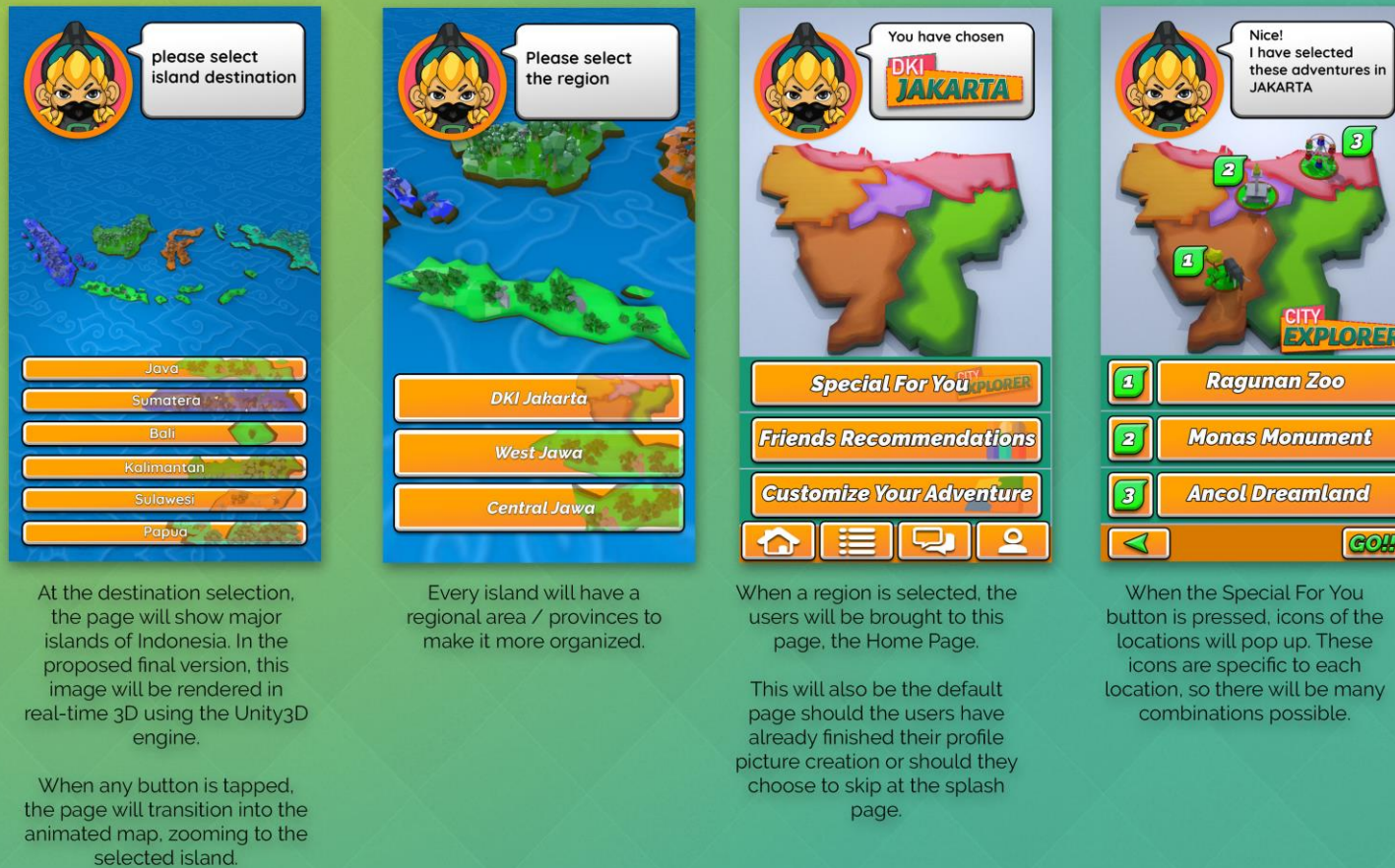
Figure 38. Destination selection prototype.

At the destination selection, the page will show major islands of Indonesia. In the proposed final version, this image will be rendered in real-time 3D using the Unity3D engine.

When any button is tapped, the page will transition into the animated map, zooming to the selected island.

Every island will have a regional area / provinces to make it more organized.

When a region is selected, the users will be brought to this page, the Home Page.

This will also be the default page should the users have already finished their profile picture creation or should they choose to skip at the splash page.

When the Special For You button is pressed, icons of the locations will pop up. These icons are specific to each location, so there will be many combinations possible.

Figure 39. Recommendations selection prototype.

8.2.4.3. Invoking the Sense of Curiosity _____

Figure 40. Travel destinations' information page.

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Figure 41. Image concept for travel destination detailing information and gimmicks.

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Monas Monument

When a destination is tapped, it will go to this page. The image will zoom into a 3D icon, the same as the selection of the main island, and it will be rendered in real-time 3D.

The pages are categorised in tabs to make it easier to read.

The images are user-generated contents. This way there will be many collections of the pictures.

Users can vote for their favourite photos, and the most voted photos will be featured on the large window.

A Google Map, complete with address and contactable number will help the users to find the destination.

Should they want to go there and need a mode of transportation, two links of share-economy transportation are available.

These links will open the appropriate app. GO-JEK is motorbike transportation while GRAB is a car one. I did not include public transportation as they are not quite so reliable.

The Reviews page will help the users to decide based on others' review.

Figure 42. Travel destination detailing information pages prototype

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In 'Immersive Experience' tab, there is a list of 360-degrees surround photos on the point of interest.

These contents are also user-generated. The users can add their photos. However, to make it more challenging, some of them are locked and can only be unlocked by doing a mission.

Information about the mission or on how to unlock certain content can be found by tapping the 'i' icon.

The 'Augmented Reality' page contents are 3D objects on points of interest and super-imposed on the actual video captured by the phone camera.

The super-imposed object is rendered in real time and affixed to certain surfaces calculated by the app.

The users can move their phone around while focusing it on a specific surface to look at educational content. It will also have unlockable contents.

This content is one of unique content that no other tourism apps have done before.

By utilising A.I. capability, the app can 'learn' the footage and place the object accordingly..

Figure 43. Augmented reality and Immersive experience pages prototype.

8.2.4.4. Invoking the Sense of Belonging

Figure 44. Profile information page.

Figure 45. Sketch on information page contents.

Figure.46. Sketch on chat page contents.

Figure 47. My Profile Page prototype flow.

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Figure 48. Chat Page prototype.

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Figure 49. Friend's Profile Prototype.

8.2.4.5. Invoking the Sense of Anticipation
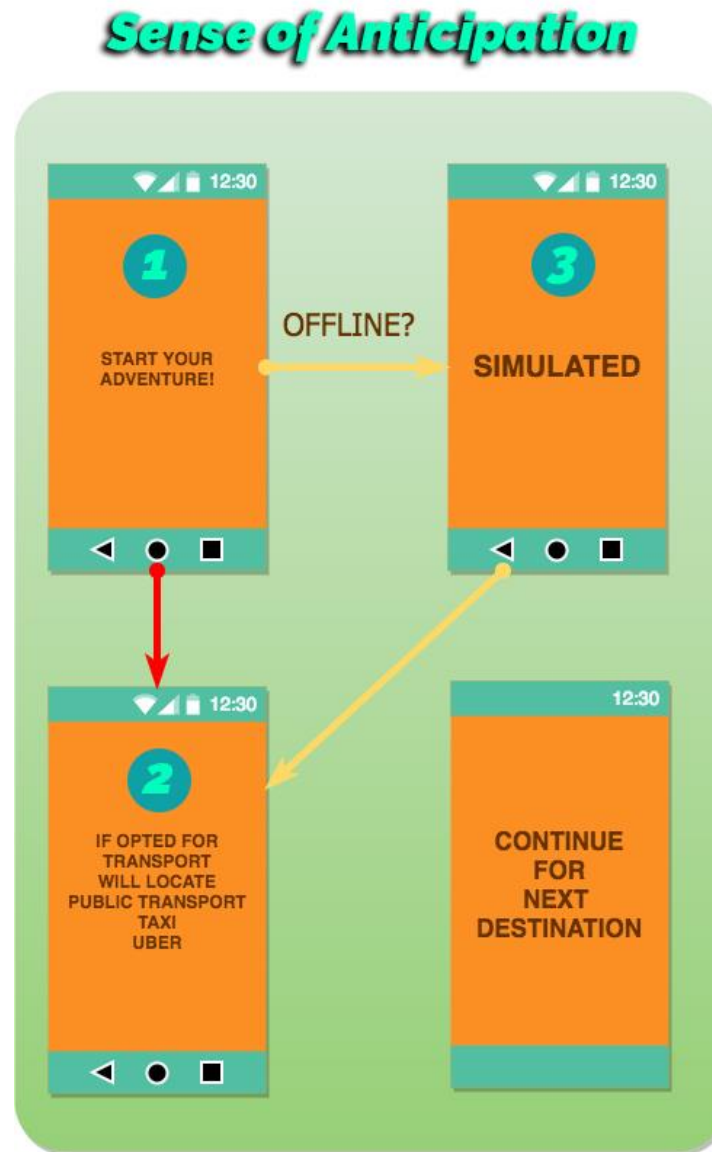
Figure 50. Adventure start page.

8.2.4.6. Invoking the Sense of Adventure
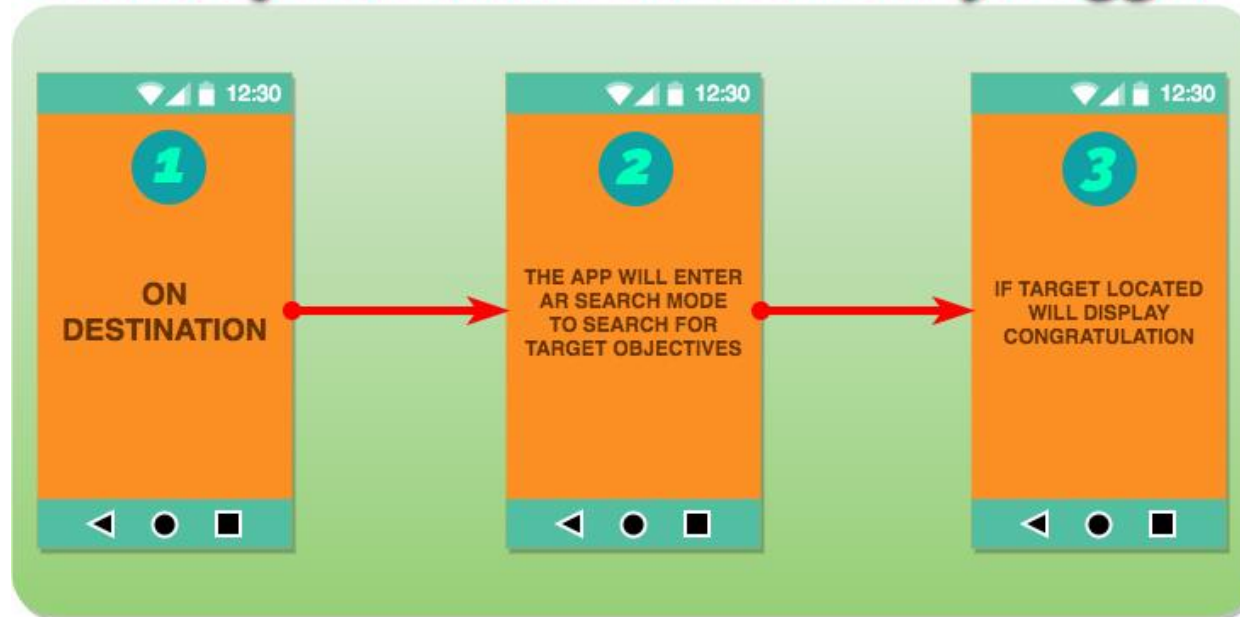
Figure 51. Gamified page flow.

The progress bar shows users' current position.
This condition will keep the users on track and show them how far they are from the destination.

In the offline mode, the distance travelled will be substituted with a specified duration of time.

The users will be given a seal of accomplishment in the form of a congratulatory page, as arriving at the destination is part of the task.

The 'Mission Start' page will build up a sense of anticipation and trigger sense of urgency.
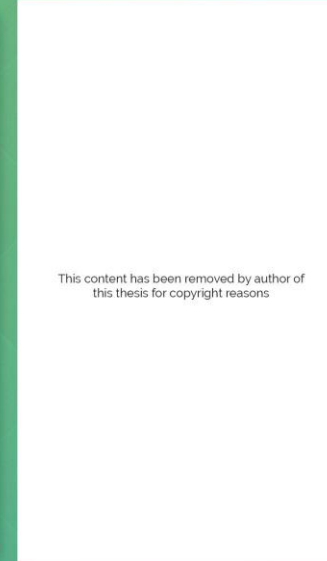
The users can participate in a mission type adventure. The objectives will help structure the users' exploration.

The missions are mainly in the type of treasure hunts, finding a particular item, object, or clue by using their phone camera.

The chat bar is added for the users to communicate with their team.

When the users successful in locating their mission objectives, they will be taken to the congratulatory page.
This will invoke the sense of acknowledgement and accomplishment.

Figure 52. Gamified contents page prototype.

8.2.4.7.   Invoking the Sense of Fulfilment

Figure 53. Reward page concept.
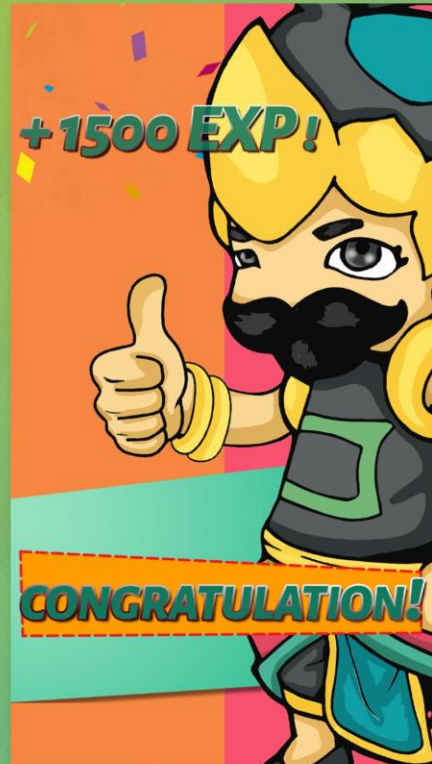
The completion of a mission will reward the users some experience points which will be accumulated to their rank requirement. More completed missions mean that the users can increase their rank quickly.

Besides the experience point, mission completed will also reward the users some collectible items such as accessories, background image for profile picture, or a new AR and VR images.

Figure 54. Reward page prototype.

8.3.1.Unused App design
Earlier typography test for the Logo

Figure 55. An early attempt on the logotype using fonts library.

Early ideas iteration for start page content

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Figure 56. An early iteration to test the content

Early ideas iteration for users' profile content
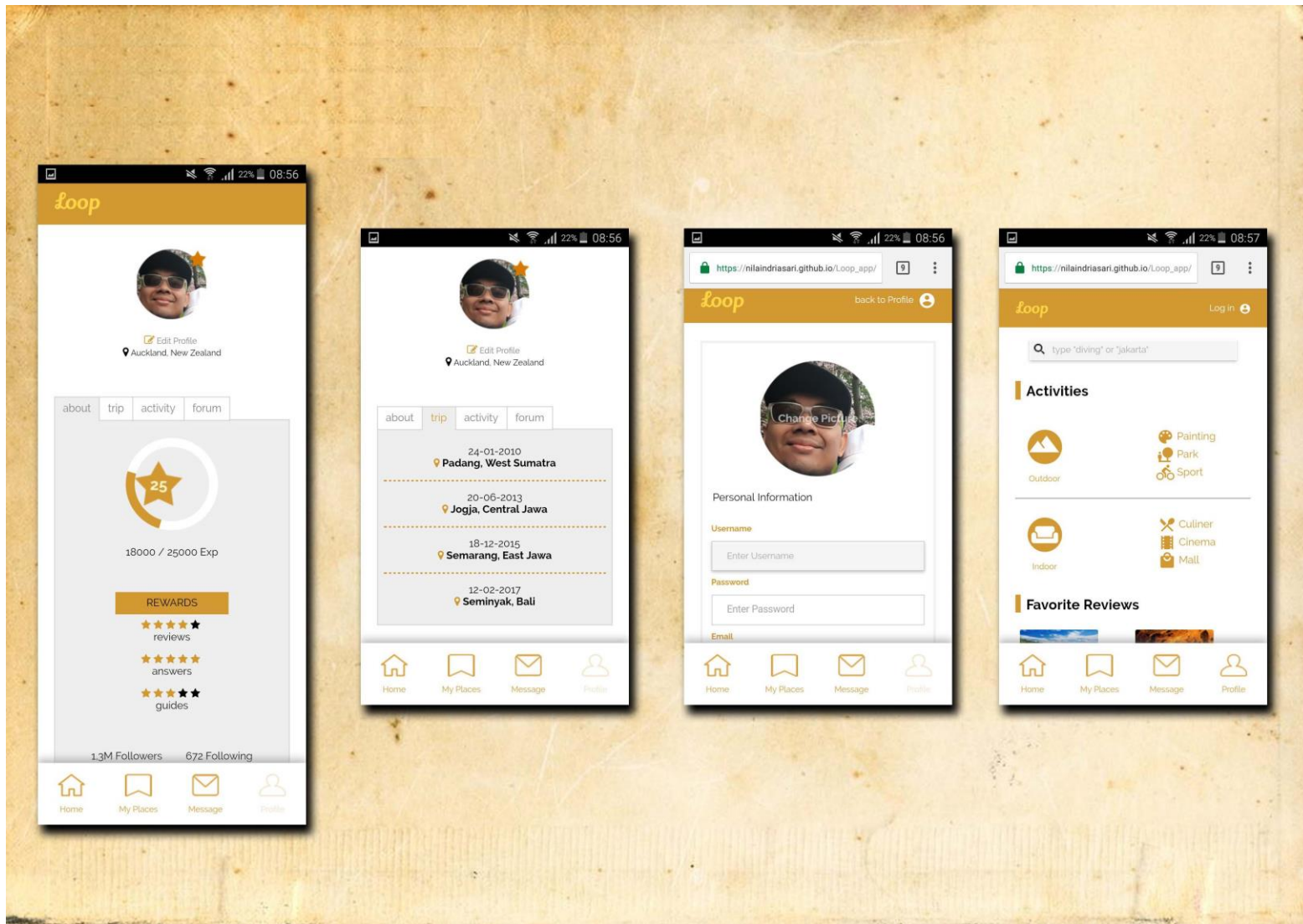
Figure 57. An early profile page attempt to test the content.

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Figure 58. An early attempt on the splash page.

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Figure 59. An early attempt for destination list.

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Figure 60. An early attempt on the map page.

8.4. The School of Art and Design Matariki Postgraduate Exhibition 2018 Documentation_____

The School of Art and Design Matariki Postgraduate Exhibition 2018

The app exhibition located against the wall within 210cm x 110 cm area.

The contents of the exhibition are:

- Computers for interactive and simulated app

- One backwall poster of app mapping

- Two character design posters

- One personas experience journey poster
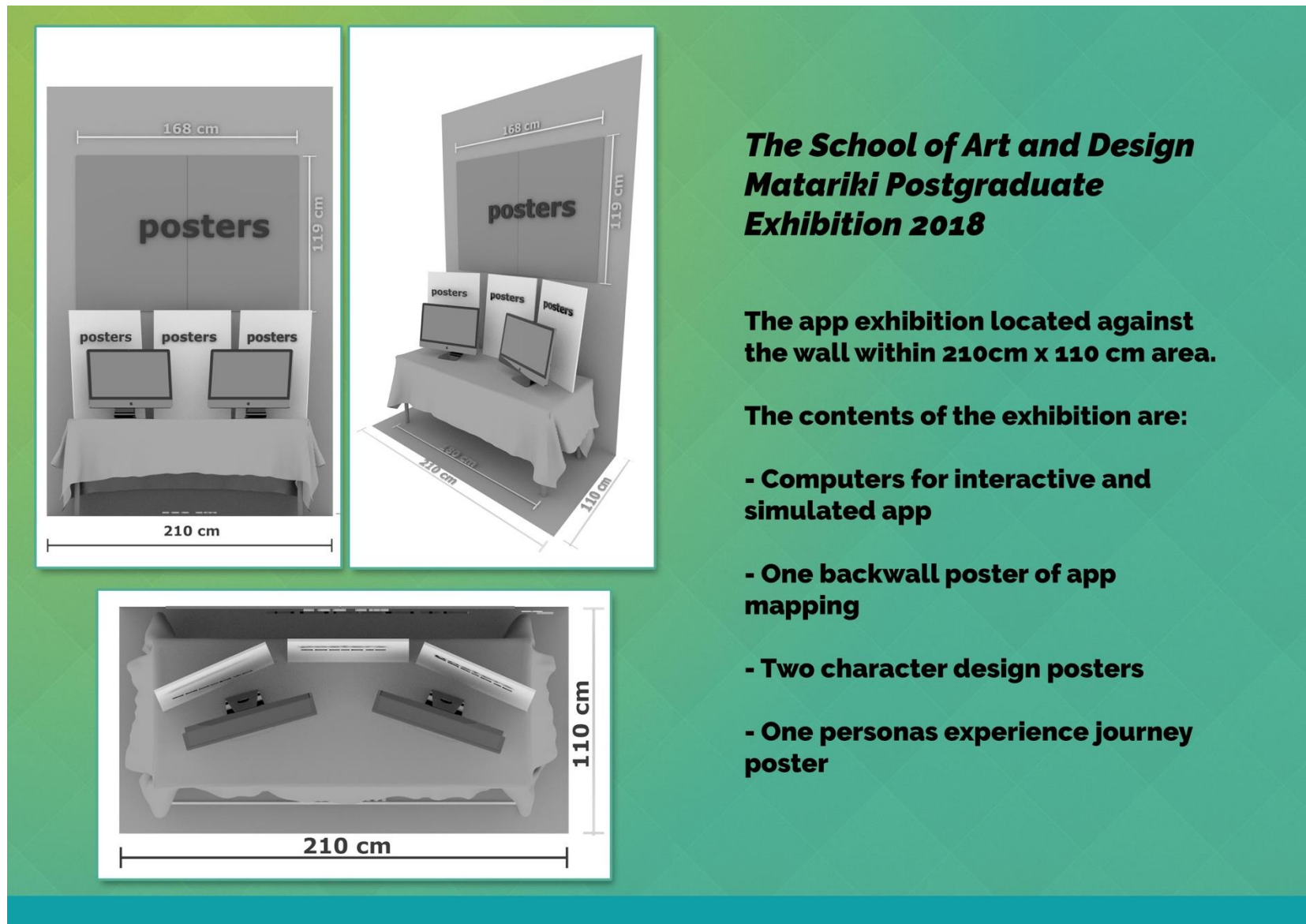
Figure 61. Exhibition's floor plan.
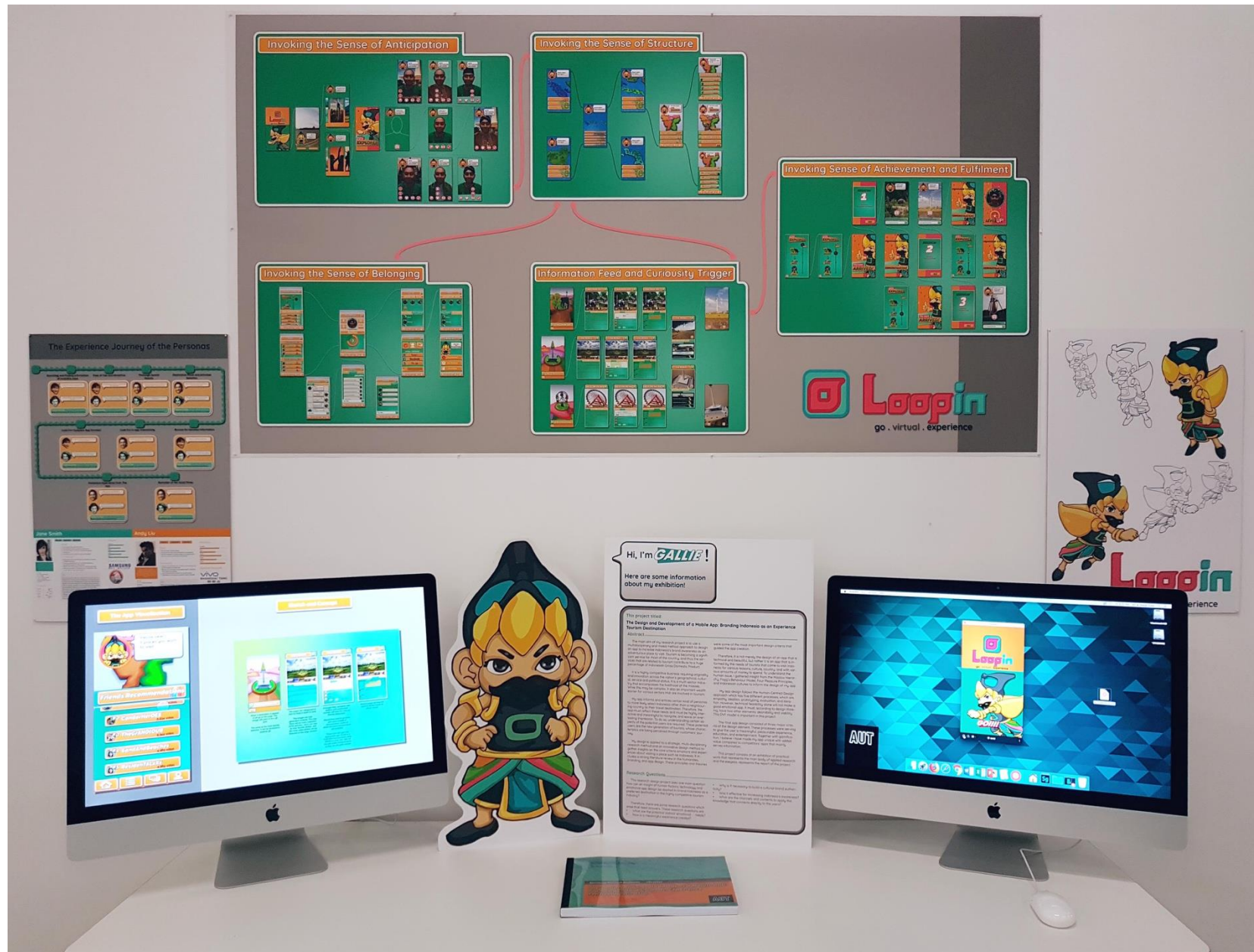
Figure 62. Exhibition's items.
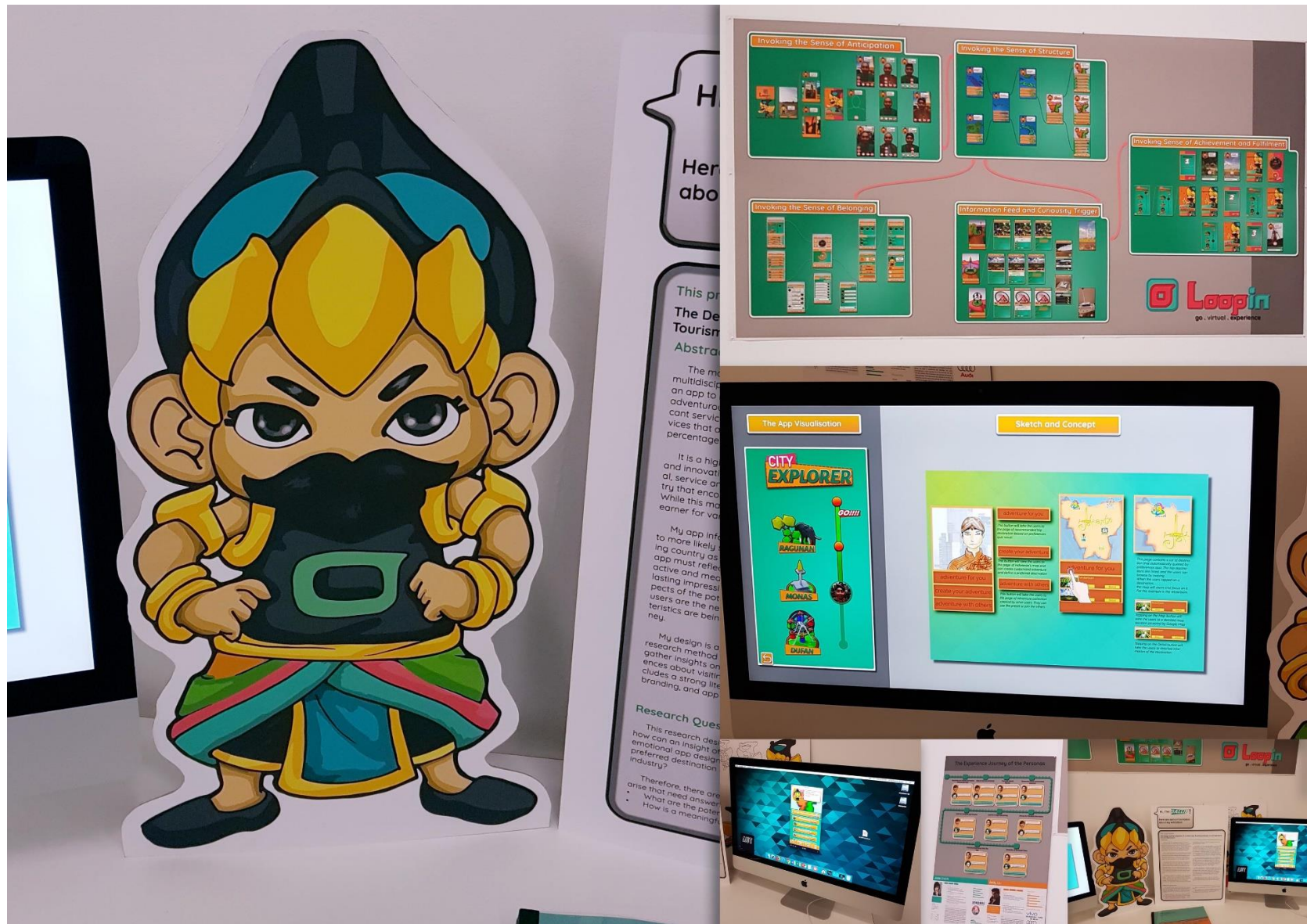
Figure 63. Mascot cut-out, app mapping, interactive and simulated app, and personas' experience journey.
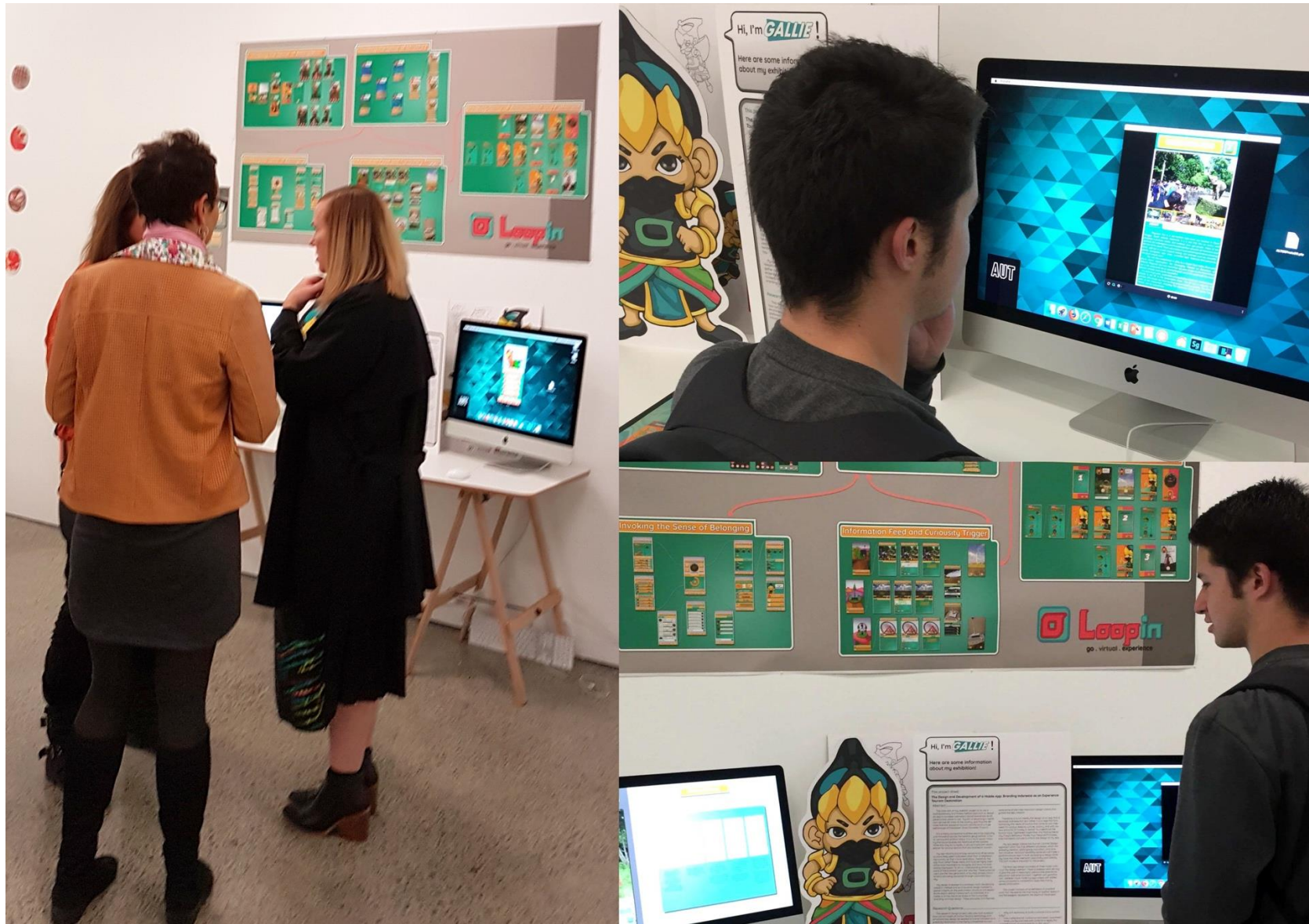
Figure 64. The visitors were interacting and discussing the app.

Chapter 9.
Critical Self-Reflection on Research Design and Evaluation

9.1. Critical Self-Reflection

In this research and design project, I have applied a multi-disciplinary research process to generate reliable insights to inform the design and development of an app that is not only functional technically, but it must be designed to increase visitors to come to Indonesia as a preferred destination. To be successful, I have combined the traditional process of designing an app that is based mainly on art and technology with Human-Centred Design to empathise with the physiological and psychological needs of my target audiences.

The principle of the Maslow Hierarchy of Needs, Four Pleasure Principles, and Fogg's Behaviour Model provided me with the sensitive theories and principles of how to provide meaningful experiences for the target audiences. All these principles and theories are then infused with Indonesian culture and legends as core design criteria for the design and content of my app. The personification of the mascot is to induce a new kind of cultural experience to attract new visitors.

A logotype called Loopin was designed to link as key branding elements throughout the business strategy for capturing brand awareness, value and cultural authenticity of Indonesia. All these will be applied in the app aimed at providing authentic information and entertainment through an edutainment strategy. The gamified contents are to provide extra motivation aimed at developing attitude and behaviour change toward Indonesia as the preferred destination for their next visit.

I have critically reflected on and evaluated my app design, and I believe that I have answered all the research questions in my discussion and design application.

Question: What are the potential visitors' emotional needs?

Answer: The potential visitor's emotional needs are determined by their past experience, upbringing, and opportunity. These are the experience that motivate and modify their decision to travel. These needs range from escape from

their daily life, self-fulfillment, achievement, and development to satisfy their heart.

Question: How is a meaningful experience created?

Answer: Meaningful experience can be created and achieved by fulfilling the tourists' emotional needs. By designing and tailoring the app for a specific audience through understanding their behaviour, I have given a more personal touch for a meaningful experience.

Question: Why is it necessary to build a cultural brand authenticity?

Answer: Building cultural brand authenticity is necessary to tell a story to create meaning, value and preferences. An authentic brand can narrate the richness and the diversity of the Indonesian culture. A culture that is authentic, genuine, and unique evokes the meaningful experience of a special place, Indonesia.

Question: Was it effective for increasing awareness of Indonesia?

Answer: Having reflected on the above design issues critically, I believe that the app could produce the positive outcomes that I have intended. This is because the design is informed by strong theories and principles from technology, science, and humanities. However, the app needs to be tested with a larger audience in a real-world environment. I intend to further develop the app into a working model with the Indonesian Tourism Board the next time I visit Indonesia.

Question: What are the channels and content to apply this knowledge that connects directly to the users?

Answer: Through the app and its design, I believe I have created an app that can directly connect to the users. To make the users more aware of this app, the appropriate channels to promote this app are through Google Play, Apple Store, and collaboration with the Indonesian Ministry of Tourism.

Finally, my design project was the only Master of Design project that had the honour to represent AUT School of Art and Design to be showcased at the Research and Innovation Showcase 2018. This showcase was an event attended by the tourism industry, educators, and governmental department audiences.

9.2. Evaluation

9.2.1. From Users' Aspects

Persona is one of the methods to understand the users' characteristics. In this research, I created the personas from publicly available data. Although it may not be perfect, I can apply them as a starting point to understand the target audiences, especially for my design project. An app needs to be flexible and adaptable because it must accommodate the ever-evolving and ever-changing users' needs through time. In understanding these initial needs, I can mould and shape the app in every way necessary without losing focus on its purpose.

Users' behaviour by generations' type is a fascinating element in defining my design project's direction. During my research, it is possible to categorise the traits and characteristics of a generation based on socio-economic influences. Moreover, this behaviour can also be sub-categorised not only by their statuses but also from their cultural origins. Although in general there are similarities with their Western counterpart behaviour, there are specific triggers that uniquely to Asian culture and the social constructs that influenced it.

9.2.2. The App

App creation is an ecosystem of many elements and multidisciplinary approach in its creation and maintenance. During this research of my design project, it was uncovered that Indonesian Tourism is only creating the app as an afterthought. They would prefer to use separated media, whereas if they integrate these promotional media, they can achieve better customer awareness. Because of this, they did not consider the app's sustainability. Should they consider the sustainability through a business model, they could have generated revenue which in turn will allow them to operate further and generate extra income for tourism. I suggest the Indonesia Tourism Ministry instead of relegating the management of the app to a contract based company, they should create a holding company that consists of the multidisciplinary operational team to maintain and manage the app.

9.2.3. For the Future

There are plenty possibilities and potential for my app feature to utilise. At the 'User Preferences Segment' where the users' preferences are diagnosed using images, it can be utilised as a Big Data Gatherer. The A.I. capability can sort the input by category and process the data to generate the users' exact preferences. This will be helpful for the Indonesian tourism stakeholder to customise new travel destinations or activities.

The advancement in technology and the Internet of Things will also upgrade this app function. Starting from a medium for information delivery through edutainment, this app will also have the potential as a library of Indonesian culture. Cataloguing travel destinations, art, traditional cuisine, and local's way of living. I certainly hope that this app could act as a Grand Library of

Indonesian Way of Living. An app as an information source for Indonesia can entice the users to have the immersive experience.

As in the next application, I want to explore the possibilities of further developing this app for advanced target audiences. I want to research the target audiences based on cultural socio-economy. Whether I should expand the target audiences to be more general but still framed within cultural characteristics instead of a generational characteristic or maybe develop it by the specific countries.

The immediate action that I will pursue next is conducting x testing of a large number of users, and create more persona from the insight that would have been gathered. I want to develop this app beyond its prototype state, and this research is needed to make it more acceptable to the public. This way I can gauge the potential of this app to become a brand frontline.

9.2.4. Link to the App Prototype

The prototype can be found at https://bambangbuditomo.github.io/loop/index.html

This is a landing page that will take you to external page of prototype.io. and please allow a moment for the prototype to load.

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