

Augmented Reality Supporting Sustainable Māori Tourism Development in Tāmaki Makaurau

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He mihi

Tuhia ki te rangi,
Tuhia ki te whenuā,
Tuhia ki te ngākau o ngā tāngata,
Ko te mea nui, Ko te aroha,
Tihei Mauri Ora

Ko te wehi ki te Atua me whakakorōria tōna ingoa
i ngā wā katoa. He mihi ki te Kingi Māori tēnā koe Pai Mārire

He mihi ki te whare tēnā koe
He mihi ki te whenua tēnā koe

E mihi ana au ki ō tātou tini mate Haere, Haere, Haere

Āpiti hono tātae hono te hūnga mate ki te hūnga mate
Āpiti hono tātae hono te hūnga ora ki te hūnga ora

Tēnā kōoutou katoa

Ki te taha o tāku pāpā

Ko Gipsy Hill te maunga

Ko Thames te awa

Ko Murphy me Day ngā tangata

Ko Ngāti Ingarangi te iwi.

Ki te taha o tāku māmā

Ko Piripiri te maunga

Ko Waitohi te awa

Ko Tokomaru me Tikitimo ngā waka

Ko Waikawa te marae

Ko Arapaoa te whare tūpuna

Ko Puketapu te hapū

Ko Te Ātiawa ki te Tau Ihu me Ngāi Tahu ngā iwi

Ko Jade Harvey ahau

Ka nui a koutou tautoko, manaaki i ahau kia tutuki pai ai i tenei kaupapa.

Nō reira tēnā koutou tēnā koutou tēnā koutou katoa

Abstract

The Māori tourism offering in Tāmaki Makaurau has remained low for over a decade compared to nearby regions, despite being the largest city and international gateway for New Zealand. This study aims to investigate how augmented reality (AR) apps can support sustainable Māori tourism development in Tāmaki Makaurau by providing an alternative way of delivering cultural tourism experiences. A kaupapa Māori methodology was used to conduct semi-structured interviews with eleven participants and included those with experience in the Māori tourism industry and/or AR Māori apps. Responses were analysed using thematic analysis and the results are discussed in relation to existing literature. Results indicate that AR is an appropriate medium for sharing Māori stories that creates engaging and immersive experiences for tourists. Furthermore, it can be successfully adapted to fit within the te ao Māori worldview and leverage benefits for Māori wellbeing. Participants identified Tāmaki Makaurau in particular as the most suitable area in New Zealand to offer AR cultural tourism due to the existing infrastructure and capabilities required for successful implementation. This thesis contributes to existing knowledge by demonstrating the potential of AR cultural tourism to offer alternative experiences in Tāmaki Makaurau as well as illustrating the benefits it can feed back into Māori communities to support sustainable Māori development.

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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 (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning."

Signed:

Jade Harvey

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Ehara taku toa, he takitahi, he toa takitini

*My success should not be bestowed onto me alone, as it was not individual success but
success of a collective*

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This thesis is dedicated with aroha to my late koro,

Bernard William Clarke

Ethics approval

This research was approved by the Auckland University of Technology Ethics Committee (AUTEC) on 10 September 2018. Ethics application 18/366 Māori-Centred Tourism Supporting Development in Tāmaki Makaurau (Appendix A).

Terminology

The use of te reo Māori has been promoted throughout this working paper as a means of communicating Māori concepts appropriately. In order to avoid ‘over-translating’ particular concepts in an effort to ensure their meanings are not changed or lost, definitions have not been included within the text of the working paper. Terminology is instead explained in a glossary, which appears at the end of the working paper (see page 139).

The use of the term augmented reality will be used extensively throughout this thesis. For ease of the reader, augmented reality will be used once in a section/paragraph and if it is used again it will be shortened to AR.

Glossary

Aotearoa – New Zealand

Iwi – Tribe made up of hapū

Kaitiakitanga – Guardianship, stewardship

Karakia – Prayer

Kaumātua – Elder

Koha – Gift

Kōrero – Story, discussion

Koru - Spiral

Kotahitanga – Unity or solidarity

Mana – Prestige, authority, power

Manaakitanga – Warm hospitality and kindness

Māori – Indigenous people of Aotearoa

Mātauranga Māori – Māori knowledge

Maungakiekie – One Tree Hill (mountain in Auckland)

Ngā matatini Māori – Māori diversity

Pākehā – Non-Māori living in Aotearoa

Pono – To be true and honest

Puawaitanga – Principle of best outcomes

Pūrākau – Story, myth, ancient legend

Purotu – Principle of transparency

Pūtea – Money, funds

Rōhe – Region

Tāmaki Makaurau – The wider Auckland region

Tangata Whenua – People of the land

Taniwha – Spirit, monster

Te ao Māori – The Māori world

Te reo Māori – Māori language

Te Tiriti o Waitangi – The Māori version of the Treaty of Waitangi

Tikanga – The correct way of doing rituals/processes/activities

Tino rangatiratanga – Self-determination

Tūhono – Principle of alignment

Waiata – Song

Wairua – Spirit/soul

Wairuatanga – state of being spiritual

Waitematā – Auckland Harbour

Waka – Canoe

Whakaaro – Thought, idea, understanding

Whakamā – To be embarrassed, shy, ashamed

Whakapapa – Genealogy

Whānau – Family

Whānaungatanga – Relationship, kinship, sense of family connection

CHAPTER ONE: Introduction

Auckland has maintained a low number of Māori tourism operators (MTO) in the region for over two and a half decades despite being the largest city and international gateway of New Zealand (Amoamo, 2007a; NZMTC, 2006; Ryan, 1997). The proximity to two regions which offer a substantial number of Māori cultural experiences as well as the lack of infrastructure in a highly urban environment are inhibiting factors for successful and sustainable Māori tourism development in Tāmaki Makaurau. Considering these limitations, there is a need to explore alternative ways for Māori operators in Auckland to deliver sustainable cultural experiences. Māori, who are noted to be early adopters of new technology (Frederick & Henry, 2003), are utilising augmented reality (AR) to connect people with Māori culture within this contemporary city setting (McLennan, 2020).

Continued developments in augmented reality and virtual reality (VR) has led to increased implementation across cultural heritage tourism sites globally (Bec et al., 2019; Han et al., 2014, 2018; Irving & Hoffman, 2014; Jung et al., 2018; Moorhouse et al., 2017; Mortara et al., 2014; Nóbrega et al., 2017). The ability to overlay information digitally through AR and VR has been viewed as an advantage on locations where physically displaying information can damage historical sites (tom Dieck & Jung, 2018). Increasingly, there are instances recorded in academic literature of various Indigenous groups using AR as a storytelling tool to create innovative tourism experiences (Adelson & Olding, 2013; Beltrán & Begun, 2014; Cunsolo Willox et al., 2013; Hopkins, 2006). Ensuring the sustainability of physical and intangible resources is an important component of Māori culture and therefore it is important to investigate how AR Māori tourism experiences align with the holistic te ao Māori paradigm.

In 2020, the COVID-19 pandemic heavily impacted the tourism industry as international travel was halted worldwide while governments closed borders in order to contain further spreading of the virus (Higgins-Desbiolles, 2020). This unprecedented global event has forced the tourism industry to adapt as a significant source of tourists and income became completely and instantly cut off. It is important to note that the data collection of this study occurred before COVID-19, and therefore it is not mentioned by the participants. However, due to the need for alternative approaches to accommodate social distancing in interpersonal interactions, the results are still relevant within a post COVID-19 tourism industry. Carr (2020) states there needs to be various approaches which are socially responsive, flexible and adept

for the recovery of tourism from the impacts of COVID-19. Ensuring tourism activities fosters positive wellbeing outcomes is deemed essential when balancing the future industry for Indigenous communities (Carr, 2020).

The aim of this thesis is to determine the potential benefits of augmented reality use in Māori tourism in relation to Māori perspectives on sustainable tourism development. A literature review examining sustainable Indigenous tourism development was undertaken. The review informed the empirical data capture as well as providing discussion points for the interviews. This chapter will firstly introduce the background to the research and rationalise the gap of literature it contributes to. The second section of this chapter presents an overview of the research setting and provides further context to the research question.

Background to the research

Due to the small number of Māori tourism operations in Tāmaki Makaurau, there is a need to investigate if new technologies can appropriately provide an alternative and sustainable means of delivering Māori tourism cultural experiences. Furthermore, it is necessary that it is evaluated from a Māori world view of what is considered sustainable development and use. This is to avoid the shortcomings and potential harm caused by research on Indigenous peoples which is founded within Western research paradigms (Mahuika, 2008). Therefore, this thesis aims to investigate: How can augmented reality support sustainable Māori tourism development in Tāmaki Makaurau?

Currently there are 11 MTOs in Tāmaki Makaurau identified by the researcher at the time of writing. This has decreased slightly from the 12 operators present at the Auckland Māori Trade Show over twenty years ago in 1996 (Ryan, 1997) and dropped from the 20 recorded in a 2006 report by the Māori Tourism Council. In a previous research project in 2017, the author of this study surveyed MTOs connected with the regional tourism organisation and there 17 operators were identified. These numbers are substantially low when compared to surrounding regions, which were also recorded in the same NZMTC report (2006) to have 92 (Northland) and 50 (Rotorua) Māori operators.

Tāmaki Makaurau as an urban destination is a unique environment for Māori tourism experiences which are typically associated with some type of natural element embedded into

the product. Examples of these include living Māori villages and nature walks with Māori guides which can be found in more rural areas such as Rotorua and Northland. These areas see the largest consumption of Māori tourism despite the comparable experiences also being available in Tāmaki. Described as “New Zealand’s tech powerhouse” (Auckland Tourism, Events and Economic Development [ATEED], n.d.), developments in technology and infrastructure are creating more opportunities for Māori to deliver contemporary experiences within this urban landscape.

In particular, this thesis will focus on the potential of augmented reality for sustainable Māori tourism development in Tāmaki Makaurau as it has garnered substantial interest in the cultural heritage and urban heritage fields for its possible benefits (Bec et al., 2019). Research has found that AR has had a positive uptake at these sites and also when used in education initiatives due to its ability to engage the audience, convey information in a novel way and create immersive experiences by fusing the real and virtual world together (Bec et al., 2019; Harley et al., 2016; Jung et al., 2018; tom Dieck & Jung, 2018). AR is mainly associated with mobile games such as the viral *Pokémon Go!*, but as technology becomes cheaper to develop and more readily accessible to consumers (Jung et al., 2018), operators are finding ways they can use AR to enhance their current offering or provide an alternative experience for tourists (Wyeld et al., 2007).

Indigenous peoples were early adaptors of this technology and have been using it in various forms (Hopkins, 2006). A commonality among these groups is the use of AR as an extension of traditional forms of storytelling, sharing beliefs and communicating traditional knowledge (Adelson & Olding, 2013; Beltrán & Begun, 2014; Cunsolo Willox et al., 2013). Increased access to the development of AR technology as well as consumer access to smart phones and internet whilst travelling has furthered the opportunities for Indigenous people to deliver their cultural tourism experiences through new mediums (Wyeld et al., 2007). There are a few examples of this in New Zealand currently, with two Māori AR platforms participating in this study, and one of which being located in Tāmaki Makaurau (McLennan, 2020). Furthermore, there is evidence which suggests AR can help in preserving cultural heritage sites and artefacts (Jung et al., 2018; Moorhouse et al., 2017; tom Dieck & Jung, 2018). This is particularly relevant to Indigenous communities that are experiencing a loss of culture due to the impacts of colonisation and subsequent urbanisation, Māori included (Lai, 2014; Wyeld et al., 2007).

While Māori are already actively developing and engaging with this technology, the importance of this research is to explore if this relatively novel type of tourism development aligns with Māori perspectives on sustainability. In Sharpley's (2000) dissection of tourism and sustainable development, he concludes that "despite its appearance as an *[sic]* holistic, equitable and future-orientated development strategy, sustainable tourism development has a largely inward, product-centred perspective" (p. 14). Supporting this statement, Pereiro (2013) criticizes the traditional means of tourism development which was formed during the era of mass tourism and employs a 'development without planning' approach. Furthermore, governments have been criticised for using tourism as an economic band-aid for the social issues faced by Indigenous people, often caused by their very arrival to these communities (Fletcher et al., 2016). The short-term development approach of mass tourism directly contradicts the sustainable, provisional thinking of te ao Māori (Lai, 2014) and therefore there is a need to determine the potential benefits for Māori and implications of AR when used as a medium for cultural engagement.

This study does not attempt to generalise Māori perspectives as the word Māori is an umbrella for term for the numerous iwi in New Zealand with differing ideologies and not a homogenous group of people. However, the Māori view on sustainability can be summarised across various iwi groups as ensuring the provision of resources for future generations by being responsible ancestors (Harmsworth, 2010). Sustainability in te ao Māori is strongly rooted to their identity as kaitiaki, or stewards, over their natural environment and ancestral land and is a role appointed by the *atua* (gods) (Harmsworth, 2010; Urlichcloher & Johnston, 1999).

Past research on Indigenous use of augmented reality has shown perceived benefits for cultural preservation specifically in relation to language revitalisation and education of Indigenous history (Beltrán & Begun, 2014; Cunsolo Willox et al., 2013). Māori are among many Indigenous groups worldwide whose culture is under threat due to losing their traditional knowledge when elders die and the impact of urbanisation causing more generations to live disconnected from their ancestral lands (Beltrán & Begun, 2014; Wyeld et al., 2007). Therefore, there is a need to find alternative ways of connecting Māori with their culture within urban environments in order to mitigate these issues and contribute to the continuation of te ao Māori.

Research question

This research aims to investigate how augmented reality can support sustainable Māori tourism development in Tāmaki Makaurau. This is to explore the opportunities AR currently presents Māori tourism operators in Auckland and if the use of these technologies is sustainable according to the te ao Māori worldview. A Māori-centred approach informed by Kaupapa Māori methodology was used to ensure Māori mātauranga was prioritised and protected during the research process. A total of 11 semi-structured interviews were conducted with participants from a range of backgrounds, which included Maori tourism operators and academics that have direct experience in Māori tourism and/or Indigenous AR platforms. The data was coded into key themes and analysed using thematic analysis (Braun & Clarke, 2006).

In order to address the research questions, the study is underpinned by the following questions:

1. How do cultural AR tourism experiences align with te ao Māori?
2. How does Māori tourism delivered through AR support sustainable development?
3. What opportunities are available for AR Māori cultural tourism in Tāmaki Makaurau?

Justification for the research

This research is justified from a practical, research and theoretical perspective that highlights sustainable Māori tourism development as a key research area.

Reviewing existing literature on augmented reality and tourism indicated there is growing interest and uptake of emerging technologies across research and industry disciplines (Cranmer, 2017, Jung et al., 2018). Specifically, cultural tourism was highlighted as an area that could benefit from digitisation due to technology's ability to present the past, reimagined and told through an innovative storytelling medium (Adelson & Olding, 2013; Hopkins, 2006). Furthermore, there are a growing number of studies that have focused on Indigenous use of AR or similar technology such as VR. This includes examples of Māori and some which are in

a tourism context (Beltrán & Begun, 2014). The results of existing studies suggest several benefits ranging from cultural preservation, to education, autonomy, economic opportunity and engagement. With such potential for emerging technologies and tourism, how Indigenous people interact and utilise technology for such purposes could therefore be of interest to researchers, and other stakeholders including regional tourism organisations, operators, and tribal entities.

From a research perspective, this work aims to address Tāmaki Makaurau's low Māori tourism presence and explore the potential of Indigenous tourism experiences within modern, urban environments. Although Auckland is one of the main entry points into New Zealand, home to nineteen different mana whenua (Te Kāhui Māngai, n.d.), as well as 25% of the total Māori population (Independent Māori Statutory Board, 2016), it has maintained a low number of Māori tourism operators compared to surrounding regions. Research into Māori tourism in Tāmaki Makaurau could investigate and address possible barriers to development which is essential for ensuring Māori have apt opportunities to enhance the social and economic wellbeing of Māori.

Theoretically, this thesis contributes to research of AR/VR tourism and Indigenous tourism development. With constant progress in technology being made, there are new opportunities for how tourism can be delivered and experienced and these are becoming more accessible by both the operators and users (tom Dieck & Jung, 2018). It is important that Māori have a chance to share their input concerning the possible digitisation of certain aspects of their culture. Furthermore, Māori tourism as defined by McIntosh et al. (2004) is founded on several Māori values. Many of which are ultimately underpinned by the principle of ensuring provisions for future generations and therefore, it can be argued that Māori tourism by nature requires sustainable development planning and practices. This research, then, provides value by centring Māori voices and contributing their perspectives on how future Māori tourism development involving technology, can also be sustainable according to te ao Māori.

Research methodology

Indigenous research recognises the inability of research rooted in Western epistemologies to conduct culturally safe research which centres Indigenous knowledge and returns benefits

back to the community (Pihama, 2001; Smith, 2012). Kaupapa Māori is an Indigenous research approach specific to Māori communities and was developed in response to the inadequacies of Western research (Pere & Barnes, 2009; Walker et al., 2006). Therefore, this thesis positions itself using a Māori-centred approach by applying Durie's (1996) framework.

This research consolidates a wide body of literature to develop the researcher's understanding of sustainable Māori tourism development and augmented reality within the context of Indigenous tourism. This is further developed through the empirical research undertaken which utilised one-on-one, semi-structured interviews. Qualitative interviews were selected in order to collect rich and in-depth data on the views, experiences, beliefs and/or motivations of the participants (Gill et al., 2008). This method also aligns well with the cultural protocols embedded into Kaupapa Māori methodology (Walker et al., 2006). In addition to the Māori tourism operators that participated, there were a few non-Māori participants who were included due to their expertise on Māori tourism development and/or Indigenous augmented reality experiences.

The findings are analysed using thematic analysis, which is described by Braun and Clarke (2006, p. 79) as "a method for identifying, analyzing [*sic*], and interpreting patterns of meaning (themes) within qualitative data". Further information about the methodology of this thesis is discussed in Chapter 3. The research questions are explored by analysing and discussing the key findings from the data in relation to the literature review and is presented in Chapters 4 and 5.

Thesis structure

The subsequent chapters of this thesis explore the use of AR for sustainable Māori tourism development. Following the Introduction Chapter, the thesis is organised into five chapters which report on each stage of the research process.

Chapter 2 provides a review of literature and previous research on the topic of Maori tourism development and the use of AR in Indigenous tourism experiences. The purpose of the literature review is to establish how sustainable tourism development is defined according to Māori perspectives as well as present research on existing examples of technology integrated with Indigenous tourism experiences.

Chapter 3 outlines the methodology of this research. The use of a Māori-Centred approach informed by Kaupapa Māori methodology is justified and the reasons for selecting the research methods are explained. In-depth interviews and thematic analysis are utilised to examine the research question and the procedures for data collection and analysis are discussed.

Chapter 4 presents the key findings from the interviews and quotations are provided throughout to support the accuracy of the data analysis. The themes which emerged from the analysis are arranged according to the three research questions. The first section focuses on participant views of sustainable Māori tourism development and the second section provides insight into how AR may align with common goals of te ao Māori. The third section looks at the current opportunities in Tāmaki Makaurau for Māori AR tourism development and the final theme highlights any issues raised by participants.

Chapter 5 analyses and discusses the comparison of the empirical findings with the literature reviewed in Chapter 2. This process involves exploring each research question in order to provide insights into the gaps identified in past research.

Finally, the thesis summarises the significant findings and outlines the key recommendations and contributions this research makes to the field of Māori tourism. The implications for research and practice are considered, and the limitations of this study as well as future recommendations are presented.

Research Setting

Māori of Aotearoa

Māori are the *tangata whenua* of Aotearoa, which translates to ‘people of the land’, and they are recognised as the official Indigenous people of New Zealand (Thompson-Carr, 2013). Before the arrival of European settlers in the mid seventeenth century, Māori had already occupied New Zealand for several hundred years, forming their own communities through tribes, or *iwi*, and developed a system of value and knowledge distinct to Western paradigms which still remains today, known as *kaupapa Māori* (Thompson-Carr, 2013). The 19th century saw the intervention of the British in New Zealand with the introduction of the Treaty of Waitangi, the founding document by which Māori entered a partnership with the Crown. This treaty agreement was signed in 1840 by the Crown and a number of Māori chiefs, the majority from North Island tribes. Both parties signed the treaty in their respective languages, however the ambiguous and often contradicting terms in the texts led to serious misunderstanding and now they are recognised as being two different texts due to the significant differences in the translation (Walker, 2004).

The colonisation which followed the signing of the treaty resulted in drastic changes to the Māori way of life despite the Māori version explicitly promising their right to retain autonomy over their land, people and laws. Today, Māori are considered a disenfranchised people because of the direct impact of colonisation which presented in various forms such as government legislation, cultural assimilation, land wars and confiscation which occurred throughout the mid-to-late nineteenth century (Thompson-Carr, 2013). Once the majority culture, Māori suffered from substantial population depletion caused by a range of factors including foreign diseases, inter-iwi wars, international wars, loss of fertile land and means of income (Poata-Smith, 2013). Once the majority in Aotearoa, today Māori only account for 15% of the New Zealand population (Statistics New Zealand, 2015).

A Māori Perspective

In order to understand the key concepts on which this research is based upon, it is important to first understand sustainability from a Māori worldview as it informs tikanga and therefore underpins the Māori way of being in the world. Tikanga refers to the societal guidelines which

inform general behaviour and interaction in Māori culture (Harmsworth, 2010). Like many other Indigenous groups, Māori view the world around them holistically and see the landscape, animals, nature, weather and mythology as being interconnected living things, each possessing their own *mauri* (life force) (Matunga, 1995). As such, Māori place themselves in the world in relation to their environment and in the process, they form their identity based on the layers or foundations of the relationships between themselves and all living things. This is how they made sense of the world around them and ultimately determined how they are to act within these relationships. This deep kinship between the natural world and humans is encapsulated in the core value of *kaitiakitanga* (guardianship), by which they realise they are not superior to nature but instead there to protect and preserve it for future generations (Harmsworth, 2010). Subsequently, their associations with their traditional lands and natural resources is where their *mana* (spiritual well-being) manifests from (Carr, 2007). This holistic Māori paradigm is apparent in all aspects of iwi life and continues into their ethical and social structures (Ryan, 1997).

Researchers acknowledge there is no specific definition which can adequately cover all expressions of Māori tourism, Māori tourism businesses and their products. As a result of this, definitions of Māori tourism have been ambiguous and vague in order to remain inclusive. An example is Zeppel's (1997) description of Māori tourism which determines it to be "any tourist experience of Māori culture" (p. 78). Others consider tourism operations which are being driven by values that run deep throughout te ao Māori as a way to define Māori tourism (Amoamo, 2007b; McIntosh et al., 2004; Thompson-Carr, 2013; Zygadlo et al., 2003). There is a general consensus that self-determination is the minimum requirement for a tourism operation to be considered Māori. In other words, if they self-identify as a Māori tourism business then that is enough for them to qualify to be so (McIntosh et al., 2004).

Zygadlo et al. (2003) and McIntosh et al., (2004) saw the need to develop a definition which encompassed the culture and values of Māori within tourism, and more importantly, be directed and informed by Māori themselves. They consulted with Māori to develop the concept of 'Māori-centred tourism' (MCT). MCT is comprised of nine values, simultaneously serving as principles and outcomes, that incorporate the essence of Māori culture into a comprehensive definition of Māori tourism. The nine principles and outcomes contain various sustainable aspects, concerning the provision for future generations and conserving

resources, be natural or cultural. Its values-based criteria also provides a more inclusive, yet detailed definition of Māori tourism which include but are not confined to: *Wairuatanga* (state of being spiritual), *Whanaungatanga* (relationship or kinship), *Ngā matatini Māori* (Māori diversity), *Kaitiakitanga* (guardianship), *Manaakitanga* (warm hospitality), *Tino rangatiratanga* (self-determination), *Kotahitanga* (unity or solidarity), *Tūhono* (principle of alignment), *Purotu* (principle of transparency) and *Puawaitanga* (principle of best outcomes) (McIntosh et al., 2004). The concept of Māori-Centred Tourism (MCT) will be used for the purpose of this study as it incorporates core Māori values and ideals that are fundamentally underpinned by sustainability and are encompassed within tikanga Māori.

These values can also be linked to community-based tourism, representing sustainable tourism in terms of respecting “the socio-cultural authenticity of local communities, conserving their cultural and natural heritage and traditional values by ensuring viable, long-term economic processes, providing socioeconomic benefits that are fairly distributed to all stakeholders” (Saarinen, 2013, p. 222). Zapalska and Brozik (2017) found this in their study of Māori female entrepreneurs within tourism where high value is placed on sustainability derived from Māori well-being philosophy, similarly discussed by Spiller et al. (2011).

Intangible aspects of Māori culture are considered to also possess *mauri* and be interconnected such as tangible objects are. This concept of interconnectedness between values is represented in the koru spiral (see next page for Figure 1) as it shows no hierarchy among them, instead each contributes to the overall wellbeing of community and whānau (McIntosh et al., 2004, p. 341).

The Māori worldview on the perception of time also provides further insight into how these values influence their everyday actions, as they take into consideration the responsibility they have as ancestors to future generations. The following quote describes the complexity of this relationship:

“...the past, the present and the future are viewed as intertwined, and life as a continuous cosmic process. Within this continuous cosmic movement, time has no restrictions – it is both past and present. The past is central to and shapes both present and future identity. From this perspective, the individual carries their past into the future. The strength of carrying one’s past into the future is that ancestors are ever present, existing both within the spiritual realm and in the physical, alongside the living as well as within the living.” (Rameka, 2016, p. 387).

Figure 1

Māori-Centred Tourism – Koru (Spiral) of Values



Note: From “Rethinking Māori tourism,” by A. J. McIntosh, F. K. Zygadlo, and H. Matunga, 2004, *Asia Pacific Journal of Tourism Research*, 9(4), p. 341 (doi:10.1080/1094166042000311237). Reprinted with permission.

The duty of being a responsible ancestor plays a significant role in Māori culture and therefore influences their view on sustainability and resource management.

In essence, the Māori identity is inherently and indivisibly linked to the land and this is reiterated in formal greetings of *whakapapa* in which they introduce themselves in relation to “their geographic place of origin, by identifying their maunga (tribal mountain), their awa (tribal river), then their iwi (tribe), hapu (subtribe) and tupuna (tribal ancestor)” (Carr, 2007, p. 115). Rameka (2016) states that “*Whakapapa* connects the individual to the past, present and future....Māori are part of the environment, connected to everything in it, therefore it requires respect.” (p.389). Understandably, the place names, history and mythology that hold associated meaning with the landscape add further significance for Māori, and enables them to establish a sense of belonging to not only the land but also to the people that occupy it (Carr, 2007). This describes the over-arching beliefs of Māori in which they share traditional values for the environment but it is important to note there are differences on a local level between the relationship of the *tangata whenua* and the land based on their *iwi*, *hapu*, and *whānau*.

Tāmaki Makaurau

Tāmaki Makaurau refers to the Auckland region and translates as the isthmus of a hundred lovers, or a place desired by many (ATEED, 2018; McClure, 2016). This name was given due to being a highly contested and fertile resource for a number of groups, including various iwi and European settlers, who for centuries co-inhabited and displaced one another in the region (McClure, 2016). In modern day, Auckland is the largest city in New Zealand and the gateway for the majority of international visitors. It is recognised for its ‘melting-pot’ identity in which many cultures and ethnicities are present, creating a multi-cultural urban environment. Its landscape environment is equally as diverse and includes numerous beaches, islands, volcanoes, and the Waitākere Ranges all within proximity of the city which provides a unique playground for tourists.

Iwi of Tāmaki Makaurau

Auckland Council formally recognises 19 iwi authorities in Tāmaki Makaurau (Auckland Council, n.d.), for a full list see Appendix D.

The Māori Report for Tāmaki Makaurau (Independent Māori Statutory Board, 2016) shows that 12% of the region’s population is Māori and accounts for 25% of all Māori living in New Zealand. According to Ryks et al. (2014), the movement of Māori from rural to urban environments gained traction after World War II and “has been recognised as one of the most rapid internal migrations by a population globally” (p. 4). In under a century, it drastically changed from 84% of Māori living rurally in 1926, to 62% of Māori in cities by 1966 and in 2006 almost 85% of all Māori were living in urban areas (Statistics New Zealand, 2006). Out of the Māori population in Auckland, 50% are aged 25 and under, showing that a large number of young generation Māori are located in Tāmaki Makaurau (Independent Māori Statutory Board, 2016). These statistics are important to keep in mind especially considering the implications of internal migration on Indigenous people which often include socio-economic disadvantages as well as loss of language, culture and identity (Ryks et al., 2014). It also provides a picture a young generation of Māori that are growing up in an urban environment, where they can feel disconnected from their identity as Māori (Beltrán & Begun, 2014).

Recent decades has seen increased attention and accountability for the government to abide by treaty obligations, which has resulted from an emergence of intense pride of Māori culture, and most noticeably manifested in land reclamations the call for the rights of Māori to be recognised especially in government matters (Thompson-Carr, 2013). The Waitangi Tribunal reports on the tribes within the Tāmaki region released in the 1980s stated significant land loss and led to subsequent treaty settlements for the affected iwi. Ngāti Whātua at Ōrākei owned the majority of land in Tāmaki but by mid-century they had lost ownership of all but 700 acres. At the start of the 19th century the remaining land was partitioned by the Native Land Court, leaving the hapū as a whole unable to use their land (Te Papa National Museum of New Zealand, n.d.). Along with the mana of the hapū being restored, an agreement was reached to have iwi and Auckland council co-manage an area of reserve land for the benefit of both the hapū and the people of Auckland. Ngāti Whātua at Ōrākei remains a prominent iwi in the region to the present day and have a tourism portfolio under their iwi business operations.

Ngāti Pāoa on Waiheke Island suffered substantial land loss with the report stating they had been made almost completely landless, and as a direct result a treaty settlement was signed transferring ownership of Ngāti Pāoa Station as well as providing some finance (Taonui, 2017a). Land loss of iwi around the Manukau Harbour led to the introduction of the Resource Management Act 1991 which denoted consideration of Māori environmental concerns, leading to Te Wai-o-Hua and Ngāti Te Ata being consultant guardians for the Harbour (Taonui, 2017a). Ngāi Tai ki Tāmaki and Te Kawerau-a-Maki were also among those receiving compensation and ownership of ancestral land with the latter having the majority of the Riverhead Forest returned. Te Kawerau-a-Maki also actively play a role in Auckland's tourism industry as they contribute to the visitor centre in Aratiaki, the gateway to the Waitākere Ranges (Taonui, 2017a).

The treaty settlements has meant the return of resources and/or monetary compensation for many iwi in Tāmaki Makaurau, which in turn has also provided opportunities for new business ventures. This led to an increase in iwi-run tourism operations as well as Māori start-ups, specifically in the nature, eco-tourism sector. While the overall number of operators in Auckland is low compared to nearby regions, Māori in Tāmaki are showing they want to have their voice heard and considered for the future tourism development in the area by forming

their own strategy plan. The *2030 Tāmaki Makaurau Tourism Strategy* created by the new body Ngā Iwi o Tāmaki, self-described as a ‘coalition of the willing’ (Ngā Iwi o Tāmaki, 2019, p. 7), is a first of its kind and is formed by eight iwi in Auckland. This indicates a shift that the planning and development of Māori tourism is moving away from relying on government bodies to incorporate Māori into their strategies. Instead, Māori are working together to form their own goals and decide based on their aspirations and metrics the areas they want to be focusing on and developing.

Tourism Development in Tāmaki Makaurau

McIntosh and Ryan (2007) note that highest participation rates with Māori cultural products occur in Rotorua and Northland due to their long history of Māori involvement in tourism and understandably they are also the locations with the majority of Māori tourism products. Although in close proximity to both of these regions, Tāmaki has not seen the same level of Māori tourism development despite being the first touch point for many international visitors into the country, who often express the desire to experience Māori culture at some point in their trip. In 1996, Te Putanga Mai, the Auckland Māori Tourism Trade Show, was held with only a dozen operators and it was of concern that in the near future Māori tourism development would remain slow (Ryan, 1997). Amoamo’s (2007a) interview with an Auckland Māori tourism operator and a representative from ATEED reveal that they are focusing on providing a more contemporary Māori tourism product using an urban-based experience. This aligns with Auckland’s metropolitan identity and the increase of Māori moving from rural to urban areas within the last century. Currently there are 11 MTOs in Tāmaki Makaurau and they can be categorised as guided tours, nature/animal experiences and traditional cultural experiences. For a comprehensive list, see Appendix D.

Auckland Unlimited

Auckland Unlimited is Tāmaki Makaurau’s economic and cultural agency and was formally known as ATEED, the region’s council-run tourism organisation. According to their website, they “work in partnership with Mana Whenua and Māori to showcase Tāmaki Makaurau Auckland, help transform our region, improve economic prosperity and bring enduring

benefits for Māori” (Auckland Unlimited, n.d.). They are responsible for tourism development in Auckland and as part of their economic portfolio and in 2018 they released a refreshed version of their Destination Auckland 2025 strategy plan. The strategy emphasizes a heavy focus on creating a sustainable city to live in and visit while drawing on the Māori values of *kotahikitanga* (collaboration), *manaakitanga* and *kaitiakitanga* to do so (ATEED, 2018a). Their revised outcome is a greater effort in fostering a unique identity for Auckland while expecting to have a stronger and more visible Māori influence on the overall region’s culture. The plan outlines a new approach which focuses on destination management rather than destination marketing through a holistic understanding formed under the three principles of kohitanga, manaakitanga and kaitiakitanga.

Māori Tourism Activities

In terms of supporting Māori tourism development in Tāmaki, Auckland Unlimited do so through various activities including marketing Māori tourism operators at industry events as well as providing a business tool kit and consultation for new operators. They are also responsible for founding and co-ordinating the Whāriki Māori Business Network, which hold quarterly networking events for Māori (and non-Māori) businesses and includes the Māori tourism operators. It provides the opportunity for Māori to meet, collaborate and potentially support each other in the industry, fostering the value of whanaungatanga and kotahitanga.

One of goals from the Destination Auckland 2025 plan is to strengthen the narrative of Tāmaki Makaurau and the stories of the region’s iwi. Auckland Unlimited worked in consultation with stakeholders including mana whenua, iwi, and Māori tourism operators to inform this strategy. As a result, the Tāmaki Herenga Waka Festival was created in partnership with the 19 mana whenua of Tāmaki Makaurau launching in 2016 (ATEED, 2018b). The aim of the festival is to celebrate the Māori heritage and culture of the region and showcase it for all Aucklanders and visitors to enjoy. Held over Auckland Anniversary weekend, traditionally the event displayed waka and featured a Māori presence, however this festival acknowledges the Māori perspective of the holiday which marks Tāmaki Makaurau’s history (ATEED, 2018b).

In April 2021, Auckland Unlimited partnered with Auckland Art Gallery to deliver *Toi Tū Toi Ora: Contemporary Māori Art* which is a “multi-sensory and immersive virtual tour” that

“reveals to audiences around the world both the wairua (spirit) and the whakaako (teachings) of the Māori creation story as articulated in the work of contemporary Māori artists” (Auckland Unlimited, 2021). This project aimed to address the on-going impacts of the global COVID-19 pandemic as international travel is no longer easily accessible. Auckland Art Gallery explain they wanted to give people the opportunity to continue experiencing art so they made the exhibition available through a mobile/computer (Auckland Unlimited, 2021).

Ngā Iwi o Tāmaki Makaurau

While Auckland Unlimited has identified prioritising the Māori tourism narrative in Tāmaki as a strategic goal in their 2025 plan, multiple iwi from the region have come together to develop a first of its kind iwi-led Māori tourism strategy (Ngā Iwi o Tāmaki, 2019). The strategy is the first of its kind for New Zealand and is under the responsibility of the new body, Nga Iwi o Tāmaki. Nga Iwi “represents a ‘coalition of the willing’ who have come together to take iwi-driven and iwi-led shared action to realise strategic ambitions through a 2030 Tāmaki Makaurau Tourism Strategy” (Ngā Iwi o Tāmaki, 2019, p. 7) and identifies eight mana whenua who participated out of the total 29. In Wikitera's (2006) study, she identifies several barriers for Māori tourism development and success in Auckland which specifies the lack of a regional strategy that also embraces the communities, iwi and hapu. These barriers are hoping to be addressed by Ngā Iwi in presenting a unified voice to tourism developer stakeholders, namely Auckland Unlimited, of how mana whenua would like Māori tourism to be developed in the region. Overall, the plan prioritises sustainability, as defined within a Māori framework, and aligns with the other government and industry tourism strategies. Notable initiatives in the strategy include the development of a ‘*Manaaki Mark*’, which functions as a quality Māori tourism identifier much like Qualmark standards.

AR Māori Platforms

Of the total eleven participants in this study, six were directly involved in developing an AR app with Māori cultural elements. Five of these participants whakapapa Māori including their platforms which are each part of a bigger kaupapa. At the time of writing, the current state of each Māori AR app included in this study are in different stages of development. Two of

the participants who identify as Pākeha also have experience in developing a cultural AR app although they play a less significant role in this study due to the scope of their respective projects. The AR platforms involved in the research are described briefly below.

In 2018, Ngāti Whātua Ōrākei launched an AR guided tour at Takaparawhau, Bastion Point, which is located at a popular tourist spot in central-East Auckland. The aim of the app is to ensure their iwi stories are widely shared using a low-impact method. In their own words, it "...adds the history and genealogy to the Bastion Pt experience so it allows visitors to understand the place in depth" (Williams, 2018). They also emphasise the importance of continuing oral traditions and ensuring the knowledge survives by making it accessible to more audiences. They needed to outsource to an AR development partner as the iwi enterprise lacked the technological skills in-house to create the platform themselves. However, Ngāti Whātua Ōrākei contributed all of the content which features real people, waiata and stories from their own iwi. At the time of the interviews the app was still in use, however it has since been deactivated.

The second Māori tourism app that participated is based outside of Tāmaki Makaurau however they were included because of their expertise in the field and being Māori themselves, they had unique insights to offer being Indigenous developers of their own storytelling app. Their app works similarly to that of Ngāti Whātua's, however instead of superimposed images, Arataki uses only audio which allows the user to immerse themselves into the environment the story speaks to. Arataki state the response from iwi has been positive and they work with several other iwi organisation as to digitally deliver their stories.

The third Māori AR platform which participated in this study has yet to venture into tourism, however cultural storytelling is a prominent part of their app and they have expressed interest in how their experience may translate into tourism eventually. The idea for ARA Journeys originated from the owners thinking of ways they could connect people to the culturally significant spaces in an urban environment as well as using digital technology to promote

cultural stories. ARA Journeys began with a council founded project which aimed to engage people with the natural environment that were participating in a South Auckland community fun run. They developed Journeys of Manu, a GPS-enabled AR app that superimposes an animated, bilingual Māori boy named Manu into real environments using a mobile device (Panuku Development, 2021). After their successful first run with Journeys of Manu, they worked with council once more to use the maramataka (Māori moon cycle) story to bring a series of related sculptures “to life” in South Auckland (Stuff, 2017). ARA Journeys is also aiming to transition into tourism by embedding Manu in other countries across Asia and the Pacific as well as the great walks across New Zealand.

Conclusion

This chapter has introduced the research problem which is to investigate how AR technology can address the low number of Māori operators in Tāmaki Makaurau by supporting sustainable Māori tourism development. The overall structure of the thesis and the research process itself, which followed a kaupapa Māori approach, has also been briefly outlined. Further context has been provided regarding the research setting by describing the te ao Māori worldview and the current dynamic between tangata whenua and Māori tourism development in Tāmaki Makaurau. The Māori AR platforms which participated in this study were also briefly introduced. The next chapter will present a review of literature relevant to Indigenous tourism development, sustainability and Indigenous use of new technologies.

CHAPTER TWO: Literature Review

Introduction

This purpose of this chapter is to provide context of sustainable Māori tourism development by examining relevant literature. The chapter is separated into two sections, the first focuses on the background of Indigenous tourism research and its evolution alongside sustainable tourism development research. The second part looks at the use of digital technologies, specifically augmented reality (AR), in cultural tourism contexts including examples from studies conducted with various Indigenous groups.

1. Indigenous tourism

Earlier studies of Indigenous peoples began accumulating and gaining interest towards the beginning of the 1800s with European colonists documenting the exotic way of life and culture of natives in foreign lands (Carr et al., 2016; Whitford & Ruhanen, 2016). These anthropologists and sociologists are argued to be the forerunners of academic research which explores the theoretical implications of identity, authenticity and empowerment of Indigenous peoples (Carr et al., 2016; Nielsen & Wilson, 2012; Weaver, 2010). The 1970's was marked as a significant time for Indigenous tourism studies (Carr et al., 2016; Weaver, 2010). Academics often refer to Smith's (1977) publication of *Hosts and Guests: The Anthropology of Tourism* to be the foundational work which paved the way for Indigenous tourism to emerge as a legitimate field of academic research (Hinch & Butler, 1996; Nielsen & Wilson, 2012). This also coincided with governments, such as Australia, showing an increased interest in incorporating Indigenous peoples into the tourism industry which is evidenced through policy documents (Whitford & Ruhanen, 2016).

Due to its origins in anthropology, Indigenous tourism was largely accepted as part of the ethnic or cultural tourism studies category (Carr et al., 2016; Hillmer-Pegram, 2016; Nielsen & Wilson, 2012; Weaver, 2010). However, now it is commonly argued to be seen as separate to these categories as although Indigenous people and ethnic groups experience similar issues, Carr et al. (2016) point out that a major characteristic difference lies within the Indigenous peoples' history of being colonised. This often resulted in forced displacement from traditional lands, inhibiting their ability to maintain their livelihoods and sustain their

communities through the loss of access to their historical, natural and cultural resources (Carr et al., 2016). Furthermore, Nielson and Wilson (2012) contend that in tourism research, Indigenous people have been invisible for the most part as there has been little consideration of their experiences, concerns or goals.

Tourism has commonly been viewed as an economic panacea for Indigenous peoples “whose traditional economies and ways of life have been compromised by the dominant societies to which they belong” (Bunten, 2010, p. 285). Governments often use tourism policies as a response to “rectify multigenerational trauma resulting from past colonial engagements, assimilationist policies, genocide, and slavery” (Bunten, 2010, p. 286) while also supporting Indigenous economic development (McIntosh et al., 2002). Walker and Moscardo (2016) state that often governments see this as an opportunity to reduce Indigenous dependency on government funding by providing more economic opportunities. However, Pereiro (2013) notes that more recently academics have voiced their criticism for tourism being so readily treated as an easy solution to Indigenous communities’ common issues relating to poverty, employment and education. Although it was designated an important role in reducing poverty, various studies have now warned against this by stating the very nature of tourism to be a double-edged sword (Pereiro, 2013; Whitford & Ruhanen, 2016) with serious implications if not managed correctly and in conjunction with Indigenous communities’ interests.

Money, knowledge and power

The integration of Indigenous culture into the tourism industry has not managed to escape the ties to politics and power that these minority groups commonly face in other areas and the challenges that come with it (Hall, 2007). Maaka & Fleras (2000) state that competition over power is inevitably bound to indigeneity or specifically the non-consenting transfer of power by Indigenous people to those who hold it currently. Hall (2007) claims that because Indigenous people have historically been and are disenfranchised and disadvantaged in mainstream society, they also lack equal access to financial and technical resources to successfully engage in challenging policies and lobbying compared to their non-Indigenous counterparts. Higgins-Desbiolles (2006) research highlights how the current economy and market environment is inhibiting tourism from realizing its full potential as an industry and

powerful social force that contributes to all aspects of well-being, environmental, social, cultural and economic.

Hollinshead (1992) argued that Indigenous cultures would continue to be disenfranchised through tourism if the perspectives of tourism developers and operators remained as heavily influenced by Western cultures and values as it appeared to be then. Henare (1999), also recognises that “the free market is not culture-free and is therefore not values-neutral” (p. 41). Henare claims the impacts of this on present day is in the form of social and economic policies which have ingrained ethical and moral codes, resulting in the implementation of such policies involving practices that are often at odds or directly conflict with Indigenous aspirations. According to Turner and Ash’s 1975 book (as cited in Higgins-Desbiolles, 2006), “tourism has proved remarkably ineffective as a promoter of equality and as an ally of the oppressed” (p. 53) which Higgins-Desbiolles claims has only worsened given the dominance of neo-liberal and Western views in the global economy. In his chapter on Indigenous tourism, Hall (2007) asserts that the relationship between power, politics and Indigenous tourism play a significant role, especially as tourism development is naively viewed as everyone having equal access to power and representation.

An important issue that Hall (2007) addresses is the lack of capacity which Indigenous communities, Aboriginals in particular, have held in order to control Indigenous development. Although Indigenous have long participated within the industry, the nature of how they participate has usually been dictated by non-Indigenous (Langton & Palmer, 2003). Maaka & Fleras (2000) describes the political climate of Indigenous policy as a constant struggle over definition and control by two opposing parties. Hollinshead (1992) criticises that these communications and visions are too often conducted entirely within the discourse of the dominant society and it is in fact the duty of the tourism industry to understand the worldview of the cultures involved. This can be seen across various Indigenous communities and until recent decades there was little to no evidence of Indigenous being formally recognised and considered throughout government policies or strategies (Whitford & Ruhanen, 2010). It was not until Aboriginal development was placed on the political agenda from the 1980s onwards in Australia that Indigenous strategies began to be formulated (Hall, 2007; Whitford & Ruhanen, 2016). Even so, Hall (2007) criticises the level to which Indigenous are involved in

these strategies as their presence often takes the form of “tokenism” with decisions already being made by the government before their participation occurs.

Lobbying for constructive engagement of Māori in social policies, Maaka & Fleras (2000) affirm that Indigenous people are not a problem to be solved or an adversary to be defeated, but a partner to work with in the spirit of cooperative coexistence. Furthermore, according to Durie (1998) within the New Zealand context, *tinio rangatiratanga* or autonomy is about Māori policy being developed by Māori as part of the partnership with the Crown, under the expectation of Māori having responsibility over Māori affairs at all tribal and national levels. Hollinshead (1992) also addresses decision makers in tourism and argues that to be value-bound, their actions do not need to be openly or overtly based on an ideology. This applies for both dominant and minority cultures, as both parties may be ignorant of how their cultural paradigms and worldviews impact their interactions with those of alternative paradigms (Hollinshead, 1992).

2. Sustainability

The academic discussion on sustainability began about 50 years ago, around the same time as Indigenous tourism and sustainable tourism research, with both lines of literature developing in a parallel fashion while at times overlapping and interconnecting (Hillmer-Pegram, 2016). A general definition of sustainable tourism has been argued by academics since literature on the topic started to emerge, however a commonly accepted and referred to definition is by the Brundtland Report (1987), which aims to align the goals of sustainable development with those of tourism (Hillmer-Pegram, 2016). It was produced as a result of a United Nations environmental conference in 1987 and it states that “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987, p. 37). Their report lists 17 sustainable development goals that contribute to the wellbeing of people and the planet, which they state tourism has the ability to influence directly or indirectly.

However, there are some serious flaws in early sustainability research as academics highlight that the impacts on the environment have been over-emphasized without full consideration of the social impacts. Hunter (1995) points out that this perspective is lacking from early

studies despite being of high importance to Indigenous peoples. Sharpley's (2000) paper on the theoretical divide between tourism and sustainable development acknowledges the criticism against the Brundtland Report which argues that it has a "central, Western-technocentric development through economic growth message" (p. 7). Carr et al. (2016) note that "like all forms of tourism, the development, implementation and management of Indigenous tourism should arguably be underpinned by the principles of sustainable development and natural resource management" (p. 1068), principles which often coincide with Indigenous values (Zygadlo et al., 2003). Sharpley (2000) provides a framework outlining the principles and objectives of sustainable development, and reiterates that it requires a fundamental holistic approach that considers both development and environmental issues.

Tourism development was quickly accepted as a solution to fix the social and economic issues that Indigenous groups commonly face, and so it was readily adopted with little concern to planning and sustainability (Fletcher et al., 2016; Pereiro, 2013). Indigenous communities have historically relied on agriculture for their livelihoods, however, a crisis in this sector is said to have caused tourism without development planning due to the increased economic weight on the tourism industry (Cañada, 2010; Pereiro, 2013). In Fletcher et al.'s (2016) study, they criticise governments for economically mainstreaming Indigenous communities by pushing tourism as a new source of income but failing to support them in mitigating the negative impacts. In Sharpley's (2000) dissection of tourism and sustainable development, he concludes that "despite its appearance as an holistic, equitable and future-orientated development strategy, sustainable tourism development has a largely inward, product-centred perspective" (p. 14). He believes that even when implemented within a sustainable planning framework, it is often adopted as the primary economic activity value despite the recognition of over-dependence on the industry coming at a cost to tourism development. These passive approaches lead to an unsustainable tourism development model within these communities as the other impacts aside from the economic benefits are not considered or planned for (Cañada, 2010).

Formative research on Indigenous tourism has supported the idea that tourism underpinned by sustainability principles ensures the development as a beneficial opportunity for improving the social, cultural and identity of Indigenous communities in addition to aiding economic well-being (Carr et al., 2016). Similarly, while investigating sustainability and culture,

McIntosh et al. (2002) determine that in order for the relationship between tourism and culture to be sustainable it must be developed in conjunction with the Indigenous people's interests. Pereiro (2013) states that despite the nature of tourism being a double-edged sword, the benefits can be better distributed and the negative impacts mitigated or reduced when it is controlled by the Indigenous community. However the top down strategies created by governing bodies are formed under the capitalist paradigm, which is primarily driven by its exploitative nature, and is fundamentally at odds with Indigenous values (Espeso-Molinero et al., 2016; Hillmer-Pegram, 2016; Mkono, 2016; Whitford & Ruhanen, 2010). Therefore, in order to be sustainable within an Indigenous context, tourism should be non-Western in nature (McIntosh et al., 2002) as the values are what set Indigenous tourism apart from the mainstream (Bunten, 2010).

Even though there has been an uptake of sustainable development approaches by governments worldwide, scholars have disputed the effectiveness and propriety of Indigenous tourism policy (Butler & Hinch, 1996). In a review of Australian policies of Indigenous tourism regarding their sustainable development content, Whitford and Ruhanen (2010) found that all but three of the 35 policies "demonstrated 'sustainability rhetoric' that lacked the rigour and depth to realise any legitimate move towards achieving sustainable tourism development for Indigenous peoples" (p. 475). Forsyth (1995) point out that there is a lack of common development and business philosophy incorporating sustainable principles despite environmentally sound policies being adopted by different sectors of the tourism industry. Similarly, in Bramwell's dissection of sustainable tourism policy he asserts "governments frequently talk 'green' but in practice, usually give priority to economic growth over environmental protection" (Bramwell, 2004 p. 32). This highlights planning and development issues for Indigenous peoples by which they appear to be included or at least considered in government strategies, however research shows it often lacks depth to be truly effective, sustainable development.

In New Zealand, the Resource Management Act was introduced in 1991 and was recognised as a world leading, innovative and key piece of legislation (Ryks et al., 2014). Due to the Act, authorities are required to adhere to principles of sustainable management while also upholding the recognition of the relationship Māori have with their ancestral lands, waterways, sacred sites and other *taonga*, or highly treasured things and places (Ryks et al.,

2014). In addition to this, local government must respect the role of Māori as kaitiakitanga over these spaces, that is the responsibility of guardianship over the natural world (Ryks et al., 2014). However, they note that there have been variances in outcomes across the cities and regions within New Zealand due to differing applications of the 'sustainable management' concept. Furthermore, Henare (1999) critiques the way in which social policy has treated Māori as recipients of initiatives and implementation. Recent changes to the Resource Management Act has reinforced the requirement of local councils to obtain formal agreements from mana whenua, which would be seen as an advancement towards a Māori-Pākehā partnership in terms of planning. However, contrary to this is the potential it creates that allows for less consultation time concerning impacts on the environment and gives the "government more control over environmental decisions, [and] may reduce the ability of Māori to have real input into decisions that affect the land and water over which iwi continue to assert kaitiakitanga" (Ryks et al., 2014, p. 10).

Maaka & Fleras (2000) argue that to truly engage with *tinō rangatiratanga*, all political parties should seek Māori consultation rather than assign them to an advisory or token Māori role. Whitford and Ruhanen (2010) criticise government policy for focusing on economic aspects of Indigenous tourism while failing to acknowledge "the full gamut of issues pertaining to the environment in the context of Indigenous tourism (p. 489). They assert that based on their findings a 'one size fits all' framework cannot be applied when approaching Indigenous sustainable policies. Instead, they recommend that consideration of Indigenous diversity is a method which is informed by collaboration, consistency, co-ordination and integration should be used to form these Indigenous policies. Furthermore, in order to facilitate long-term sustainable Indigenous tourism, it is necessary to ensure the mechanisms and capacity-building is provided (Whitford & Ruhanen, 2010). Marinova and Raven (2006) exemplify that the current 'one size fits all' approach for Indigenous people has proven it does not adequately function, which is not surprising as Indigenous peoples are often grouped as one, based on their similar experiences of colonisation, assimilation and oppression despite each community's varying worldviews and values (Butler & Hinch, 1996).

Intellectual property

It has been argued by many that patents are an inadequate method for recognising the total value of Indigenous TK which can encompass several aspects relating to economic, social, environmental, cultural and spiritual well-being (Lai, 2014; Marinova & Raven, 2006; Morris & Meadows, 2000). The World Intellectual Property Organisation (WIPO, 2016) defines TK as “a living body of knowledge that is developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity” (p. 1). Current intellectual property (IP) laws were designed to apply within Western economic parameters which is directly at odds with how most Indigenous communities, such as Māori, view the world holistically and believe that all systems within it are interrelated (Lai, 2014). In their 2005 report of TK and IP, WIPO expands on this by stating that it “encompasses the content or substance of traditional know-how, innovations, information, practices, skills and learning of TK systems such as traditional agricultural, environmental or medicinal knowledge” (p. 4). Therefore, there are many cultural aspects involved when protecting TK and IP of Indigenous people through Western property law, and often includes TK which is vital to the culture.

Protecting Indigenous knowledge

WIPO (2005) emphasise the importance of protecting TK as “for some communities, TK provides a pathway to social and economic development and new, more culturally appropriate forms of tourism” (p. 2). They use an example of the Seri people in Mexico who have distinguished their authentic art, based on their TK, through an ‘Arte Seri’ qualified mark which supports sustainable commerce of these products (WIP, 2005). Not by their own choice, Indigenous communities have had their TK has become part of the public domain as the culture has become more well-known. This is an issue which Māori have experienced in several cases where their motifs, waiata and performing arts have been used by non-Māori and without obtaining permission (Lai, 2014; Maniapoto-Jackson & Mills, 2005). Due to the time sensitive nature of IP law, it inhibits Indigenous communities such as Māori who have TK which has been passed down through generations (Lai, 2014). Furthermore, Lai emphasizes that most Indigenous knowledge systems, including Māori, are fundamentally different from mainstream society in that there may be things which are public knowledge but that does not

make it open to use by all. This also applies to members within those communities and means that knowledge is not considered part of the public domain even if it has already been disclosed (Lai, 2014). In saying that, it is also important to note that Māori do not perceive the monopoly of knowledge beneficial for the wider society, nor do they think knowledge should perish with those holding it (Lai, 2014).

Each of these academics mentioned have dissected current IP law practice and have all determined that ultimately it is unsuitable for protecting Indigenous TK in the full extent required and provide various solutions for a better approach to the subject. While they agree that it needs to be framed within a long-term sustainable framework, they offer varying practical actions when managing IP and Indigenous matters. Fletcher et al. (2016) argue that in order to achieve successful and sustainable Indigenous tourism developments, there needs to be policies in place which recognise Indigenous ownership and access to traditional resources. Which, through an Indigenous lens, would include the control over cultural and spiritual aspects associated with the land. In addition to this, they claim that control over title and land management fosters security and certainty which is vital for providing Indigenous people with the opportunity to participate and engage with Indigenous tourism (Fletcher et al., 2016). Morris and Meadows (2000) supplement this view and contribute that an important starting point for addressing Indigenous IP rights is to acknowledge that culture is a dynamic, lived experience. They state that solutions must originate from within the community in order for Indigenous to successfully empower themselves and as such it is not the responsibility of the outsider, whether that be researchers or governments, to offer guaranteed solutions, but it is their role to provide food for thought (Morris & Meadows, 2000).

Sustainable tourism development & cultural protection

In New Zealand, the Ministry for Culture and Heritage consider the “cultural aspects of development go hand-in-hand with the economic, social, and environmental dimensions of sustainability” (Lai, 2014, p. 13). Academics have discussed in length the challenge of balancing the need for commercial success and protection of culture within tourism, with studies concluding that this balance can be achieved by a variety of necessary factors (Amoamo, 2007b, Buntin, 2010). Throughout Indigenous tourism research, it is reiterated

that these key factors are Indigenous control of planning, management, identity as well as using their values to drive and implement these cultural tourism products (Lai, 2014; McIntosh et al., 2002). However, the public sector has continued to subject Māori as objects of assimilation through social policy and as such denied them the opportunity for authentic Māori development (Henare, 1999). Therefore, social policy designed for Māori has not been sustainable and Henare (1999) asserts that until it is based on authentic Māori values, it will continue to not be sustainable.

Western structures have shown to be a real threat to the commercialisation of Māori culture as it often conflicts with the main goal of te ao Māori, which according to Lai (2014) is sustainability. Lai voices the concern that Māori have about the use of their culture not only being offensive and misused, but also diminished to lose its connection to Māori entirely. Furthermore, she states that this illegitimate use of Indigenous heritage can be physically and spiritually detrimental to the kaitiaki, or guardianship, over the TCEs and TK (Lai, 2014). Therefore, to achieve sustainable tourism development while also preserving the culture, the planning and management must be rooted from within the Indigenous community so they are able to align the outcomes with the needs of their people (Lai, 2014; McIntosh et al., 2002). Carr (2007) reinforces this by stating that inauthentic use can be safeguarded against and the cultural integrity of the taonga (highly treasured resource) upheld when the community is able to provide input into cultural tourism development planning. Walker and Moscardo (2016) found that the most effective method of Indigenous tourism development is seen by many to be achieved through a combination of access to traditional natural resources which is then interpreted through a cultural value lens. This in turn results in a more sustainable form of tourism (Walker & Moscardo, 2016).

Paulson (1996) argues that “not only does Western society differ from Indigenous people in terms of cosmology, ideology and worldview but in all of the universal values” (p. 82). The previous discussions have highlighted the inherent tensions created between the multitude of Indigenous and non-Indigenous social systems, which are a direct result of these fundamentally different worldviews and values. For Māori, their universe is interconnected through the commonality of possessing being and a shared mauri, or life force, which dictates their ethical and cultural structures (Ryan, 1997). Dame Miraka Szászy, a prominent Māori leader and scholar, claims that Māori ancestral values determines the very essence of what it

means to be Māori (Henare, 1999). Thompson-Carr (2013) discusses this system of values and knowledge by which Māori lived their lives prior to European colonisation that continues to have a strong presence and today is known as kaupapa Māori, or the Māori way. Lai (2014) emphasizes the importance these values and knowledge continue to have for Māori people, as the use of these knowledge systems and “cultural practices are important for a Māori individual’s sense of identity, and connectedness to other Māori” (p. 12). Furthermore, she states that culture and identity is crucial for Māori well-being, and in accordance to the holistic Māori worldview these concepts are seen as being deeply interrelated (Lai, 2014).

Western economy

Traditionally, Indigenous tourism products have followed the ‘cultural tourism formula’ in which they “innocently follow the “folk” model of cultures frozen in time and put on display through “living” historical sites and cultural centres where workers portray people of the past” (Bunten, 2010, p. 294). However, this approach to Indigenous tourism inhibits the potential for a deeper and meaningful encounter between the hosts and the guests, as well as projecting and further solidifying a primitive image of the Indigenous community (Bunten, 2010; Mkono, 2016). Hollinshead (1992) distinguishes the terms primitive and primal, the former being associated with negative connotations of “naivety, uselessness and inferiority” and the latter of more noble meaning such as “essentiality, originality and integrity” (p. 45). In Hillmer-Pegram's (2016) study of Indigenous values and capitalism, he uses a radical political paradigm on the economy of tourism which ultimately determines that capitalism is an “unacceptably destructive mode of producing and consuming goods and services” (p. 1198). Therefore, there is a need for an economic approach which is based on the needs and values of the Indigenous people engaging in tourism activities and development (Bunten, 2010; Hillmer-Pegram, 2016).

For Māori, the essential elements of their tourism products such as *waiata*, legends, arts, cultural information and stories are considered *taonga*, or something which is highly prized (Thompson-Carr, 2013) and therefore the ‘selling’ of these *taonga* experiences comes with high cultural considerations (Amoamo, 2007b). For some tribal leaders, the potential monetary gain from commercialising their culture is not worth the risk of potential loss of internally directed cultural systems (Bunten, 2010). Up until the late 1990s, the predominant

tourist experience of the Māori tourism product was a traditional performance of *waiata* and dance, how this *taonga* was shared with visitors was often determined by iwi elders (Barnett, 1997; Thompson-Carr, 2013). In the 1970s, this type of packaged cultural experience along with mass-produced souvenirs displaying inappropriate use of traditional symbols caused worry of a 'plastic' Māori tourism product (Carr, 2017). These packaged cultural performances were commonly found in Rotorua hotels but received criticism for their absence of Māori control and influence (Carr, 2017). Ryan (2002) and Mkono (2016) argue that it reinforces the gaze towards the 'Other' and the associated negative stereotypes, further influencing the positions of power in relation to Indigenous people (Bunten, 2010).

Māori have voiced their disapproval of these marketing images as it has not only been conducted without Māori consultation but it also results in little direct benefits and undermines them as successful business owners (Amoamo, 2007a, 2007b; Carr, 2017). This perception reinforces the notion that Māori culture only exists within a pre-European context and limits Māori tourism products to those which only present the culture in traditional mediums such as the Māori living villages and kapa haka experiences in Rotorua (Wilson et al., 2006). Viewing Māori tourism as represented through this 'historical guise' is blinding tourists to contemporary Māori tourism and misses an important opportunity to experience tourism which sets Māori culture within a modern context (Fisher, 2008; Ryan & Pike, 2003; Wilson et al., 2006). Furthermore, expectations of Māori to be an exact replica of what their society looked like in 1840, before the Treaty of Waitangi and ensuing colonisation, lacks any consideration or attention to the evolution of Māori as a people (Barcham, 1998). As Tahana and Oppermann (1998, p. 26) put it, "the tourists' expectations to see an unspoiled and traditional way of life of Indigenous people runs counter to the aspirations of the very same people who would like to partake in the benefits of modernisation". Subsequently, not wanting to be misrepresented or known just as the stereotype, it became a key motivator in Māori business activity and resulted in more Māori entrepreneurial ventures within the tourism industry (Foley, 2008).

In Higgins-Desbiolles (2006) study, she discusses the contrast to the market-oriented and neo-liberalism drive of the current industry to the approach of Indigenous people to tourism which is based on spirituality and values of the culture. Higgins-Desbiolles (2006) specifically notes those from the Pacific Islands and New Zealand Māori whose cultures are underpinned with

common values of hospitality. Hall et al. (1993) describes this well-defined relationship between Māori as the host and their guests as being more than based on *manaakitanga* as it also relies on the sense of place and identity that the host holds. As a result of these inherent values, Indigenous people use their unique culture as a means to accommodate themselves within tourism based on how their cultural values determine the proper relationships between peoples (Higgins-Desbiolles, 2006). However, with economic globalisation increasing its reach and influence, these alternative approaches and interpretations of tourism are under threat by replacement from the marketized perspective of tourism multinationals (Higgins-Desbiolles, 2006). Henare (1999) recognises that in New Zealand “the free market is not culture-free, and is therefore not values-neutral” (p. 41), which at the least differs from and at the most is directly at odds with the Māori way.

Higgins-Desbiolles (2006) links theory of a ‘Third Way’ approach, which is about avoiding merely imitating Western models and finding solutions through disengagement of central economic planning and its inherent political and ideological structures. Bunten’s (2010) study, which compares Native Alaskans and Māori approaches to tourism, provides a strategy to help Indigenous communities participate within the global economy in a way which is culturally appropriate, ethical and successful. Her proposed strategy focuses on emergent models, to which she refers as second wave Indigenous tourism, where the outside demands of the tourism operation are met, for example the need to generate profits to live, but the business and operations model itself is informed and determined by the Indigenous value systems. Two important points Bunten (2010) makes is that Indigenous tourism operations are primarily conducted in a way that reflects the needs and goals of the community, and that “success is determined by the basic principle of honouring the past while investing in the future” (p. 295). In this study, Bunten found evidence that Indigenous people are currently navigating this space by incorporating their values into the business model to ‘culturalize’ their commerce, which included an example of from New Zealand, Footprints Waipoua located in the North Island.

The Indigenous economy

On the same note, Fletcher et al. (2016) recognise that there is a growing body of evidence that shows Indigenous people in remote areas are finding the middle ground between both

economic paradigms to create their own Indigenous hybrid economies. Within which, livelihood opportunities are created by blending economic and cultural activities together and as a result this also fosters the supply of crucial social, cultural and environmental services (Fletcher et al., 2016).

Looking at the New Zealand context, Carr's (2007) chapter focusing on Māori nature tourism businesses determined that many of the operators studied are working within a business environment which is inherently non-Māori. One of the operators stated, "the reality is Māori operators are working within a non-Māori business environment therefore there is a need for commercial "savvy" to ensure economic success" (Carr, 2007, p. 124-125). Carr (2007) claims the nature of the broader business environment has forced Māori tourism operators to abide by Western-style corporate management structures and business practices. Although they have quickly adapted to this non-Māori way of business, it is not always seen as a benefit as several of the operators identified having issues with the impacts of government regulations on their everyday work activities (Carr, 2007). Despite this, the Māori tourism operators were content with moving between both cultural systems as required and did not feel that this difference in business style and management compromised their own operations in any way (Carr, 2007).

Similarly to Bunten's (2010) study of Indigenous values and the commercialisation of tourism, Foley (2008) research supports the idea of differently aligned priorities when investigating the bottom line for Māori tourism SMEs. Foley (2008)'s study discovered that Māori businesses focus on outcomes based on their Indigenous values, or *tikanga Māori*, which resulted in a suggested fourth bottom line that held cultural outcomes just as important as the economic goals. Further research conducted with Māori business owners and tourism operators shows that Māori are navigating how their cultural values and beliefs can fit within these contemporary spaces where the two world(view)s collide (Spiller et al., 2011; Zapalska & Brozik, 2017). Henare (1999) states that the collection of Māori traditional knowledge has been built on from lessons of the past and cultural practices which are ingrained with traditional values. He claims that "its sets a distinctive and contextual framework for articulating spiritual and general principles that have been tried and tested over countless generations" (p. 40), serving as a guide for the future (Henare, 1999). By focusing on the principles rather than strictly adhering to traditional methods, Māori are successfully staying

true to tradition while simultaneously seeking change, a paradox which is the reality of Indigenous peoples' day to day life. This means that how resources are used and how the present challenges are being addressed can be adapted to fit within this contemporary paradox without changing the rationale behind those actions, as they continue to be based on the principles of traditional values (Henare, 1999).

An example of this in current Māori commerce can be found in Foley's (2008), Spiller et al.'s (2011) and Zapalska and Brozik's (2017) respective studies. They found that the Māori business owners they interviewed, within and outside of the tourism industry, valued outcomes for their communities as more important than their economic profits. This is reinforced by the significance that Māori hold for their collective identity as part of an iwi, hapu, and whanau, which can be directly linked to their traditional values of *whanaungatanga* and *kotahitanga*. Ryan (1997) makes an interesting point that as Māori succeed in claiming their ancestral lands back, they may start to become less interested in tourism as a way to advance economically. For Māori, tourism is more than showing landscapes to tourists, as cultural taonga is intrinsically embedded into the experiences (Amoamo, 2007a). Therefore, by engaging in the tourism industry Māori are constantly having to determine what is and is not acceptable regarding use of their culture which may ultimately defer them from participating in tourism to avoid navigating those grey areas (Ryan, 1997).

Māori tourism context

As with the majority of Indigenous peoples, tourism was viewed as an employment and income opportunity for Māori and the Treaty of Waitangi settlements have enabled Māori to benefit from being able to invest in tourism development which in turn has contributed to community benefits such as cultural revival and employment (Carr, 2017; Thompson-Carr, 2013). Recent decades have seen an increase in Māori owned and controlled tourism development, especially within the ecotourism and nature sector (Carr, 2017). This is mainly attributed to the Treaty of Waitangi settlements which returned land, appointed governance or co-governance with the council or monetary compensation based on fulfilling the principles of the Treaty (Barnett, 1997; Carr, 2017). Covered more extensively in the research setting chapter, the Treaty of Waitangi is the founding document between Māori and the British Crown agreeing to the settlement of British subjects. It aimed to ensure the traditional

rights of Māori but colonisation amongst assimilationist legislation, land wars and confiscation resulted in Māori becoming severely disenfranchised (Walker, 2004). These events which occurred in the mid to late nineteenth century were challenged when a revival of cultural pride by Māori began in the 1970s onwards placed pressure on the government to uphold their part in the Treaty (Thompson-Carr, 2013). From the 1980s onwards, Carr (2017) notes how Māori tourism experiences began to be managed through a more strategic approach and Māori were increasingly being able to control how their culture was being represented and used within the tourist industry as consultation processes were put in place.

With the global shift of mindset in favour of seeking more sustainable approaches to business, New Zealand has also followed suit which is evident through marketing campaigns and strategy plans that focus on sustainability. An example of this is the 'Tiaki Promise' campaign launched by Tourism Industry Aotearoa (TIA) in 2018, alongside six key New Zealand tourism organisations including New Zealand Māori Tourism (TIA, 2018). In te reo Māori, *tiaki* means to care and protect and the campaign is based on the Māori belief that we are guardians of the land, oceans and waterways (TIA, 2018). By taking the Tiaki Promise, tourists are committing to "care for land, sea and nature, treading lightly and leaving no trace; travel safely, showing care and consideration for all; respect culture, travelling with an open heart and mind" ("TIAKI - Care for New Zealand," n.d.). Similarly, the New Zealand Tourism 2025 national strategy plan first released in 2014 has been refreshed as 'Tourism 2025 and Beyond – A Sustainable Growth Network', with sustainability now being included as the core focus and number one action goal (TIA, 2019).

The strategy, which is led by industry, is outlined by three core, Māori, values which are kaitiakitanga (guardianship and protection of nature), manaakitanga (hospitality) and whanaungatanga (a sense of family and belonging to a community). This was in response to a 'Mood of the Nation' survey which found that New Zealander's are concerned that not enough is being done to mitigate the negative impacts of tourism (Cropp, 2019). This can partly be attributed to the aspirational goals of the original Tourism 2025 plan released in 2014 which aimed to stimulate growth after the industry had been experiencing a stagnant period of demand (TIA, 2019). TIA now recognise that after successfully fostering growth, they need to focus on managing the resulting impacts which has placed pressure on various aspects of New Zealand's tourism system (TIA, 2019). In addition to founding their strategy

on Māori values, it is important to note that TIA has included embracing Tikanga Māori as one of the top ten actions of the strategy (TIA, 2019). Discussed in further detail later in this section, Auckland's regional tourism strategy, also refreshed earlier in 2019, and the collective iwi regional tourism strategy reflects moving towards more sustainable outcomes for the industry based heavily on traditional Māori values (ATEED, 2018; Nga Iwi o Tāmaki, 2019).

The Ministry of Business, Innovation and Employment (MBIE) in collaboration with the Department of Conservation (DOC) has also just released a New Zealand-Aotearoa Government Tourism Strategy in May 2019, which sets out “a more active, deliberate and coordinated approach to tourism” (MBIE, 2019, p. 2). In contrast to the TIA 2025 strategy which focuses on stimulating the industry, the New Zealand-Aotearoa plan concerns itself with co-ordinating and activating the role of the government across the various Ministries and connected bodies in the tourism industry (TIA, 2019; MBIE, 2019). MBIE state that over recent years the capacity for tourism has been inundated with visitor growth and thus there is a need for a strategy which ensures “tourism growth to be productive, sustainable and inclusive” (MBIE, 2019, p. 2). In doing this, their aim is to preserve and restore the natural environment while also enhancing the well-being of all New Zealanders. In similar fashion to the industry led Tourism 2025 and Beyond plan, the government's tourism strategy is wholly underpinned by sustainability. Furthermore, part of their aim is to foster outcomes that draw on the tikanga values of ōhanga/whairawa (economic prosperity), manaakitanga, kaitiakitanga and whanaungatanga (MBIE, 2019), which also aligns with the values of the TIA strategy. MBIE also emphasize in the strategy that their involvement in the industry needs to take a predominantly kaitiakitanga role by working “more actively with iwi, hapū and tangata whenua, local government, industry, businesses, regions and communities to shape future growth, manage its impact and better coordinate investments” (MBIE, 2019, p. 2). An important goal to note for Māori in particular is that MBIE aim to improve relations with mana whenua across all of the outcomes, which indicates they will be consulted with on how each outcome is achieved (MBIE, 2019).

[Tāmaki Makaurau](#)

Auckland Unlimited, the regional economic development and cultural agency, has in recent years pushed the bicultural narrative of Tāmaki Makaurau to reflect its namesake, “the place

desired by many” (ATEED, 2018, p. 3). This change in the city’s brand marketing reflects a move towards positioning Auckland as a multi-cultural city and places emphasis on its diverse range of experiences which include Māori culture. This shift is also noticeable in ATEED’s (2018) refreshed version of the Destination Auckland Plan 2025, originally released four years prior. The new strategy has a stronger focus on sustainable growth and a deliberate shift from destination marketing to destination management through a holistic understanding formed under the three principles of kohitanga (collaboration), manaakitanga and kaitiakitanga (ATEED, 2018). In the strategy they emphasise a heavy focus on creating a sustainable city to live in and visit while drawing on the aforementioned Māori values (ATEED, 2018). ATEED (2018) explain this fundamental change in thinking and approach as aligning “with what is increasingly considered best practice across the businesses community and in society generally: a growing awareness of, and concern for, sustainability” (p. 6). Their definition of sustainability includes that of the widely adopted UNWTO version as well as aiming to benefit socio-economically from tourism development while reducing or managing unwanted impacts on the cultural, social, historic or natural environment (ATEED, 2018).

Their revised outcome is a greater effort in fostering a unique identity for Auckland while expecting to have a stronger and more visible Māori influence on the overall region’s culture. As a result of the widespread consultation for this plan, six strategic imperatives were developed to shape the overall direction of Destination 2025. The six desired outcomes is that Auckland becomes: a unique place with a unique identity; a connected place as an easy to navigate region; a captivating place that encourages longer tourist visits; a skilled place that provides suitable workers for the industry; a world-leading sustainable place; and an insightful place where managing and marketing decisions for the visitor economy are informed (ATEED, 2018). Of the 12 key focus areas, the ones with the most relevance to the scope of this study are: connectivity and dispersal, with mention of improving digital connectivity; cultural arts and development, promoting development of authentic Māori cultural experiences; product development, encouraging attractions consistent with Auckland’s identity and; positioning and narrative, offering a positioning statement for Auckland which is clear, unique and “reflects its many narratives” (ATEED, 2018, p. 12).

Despite New Zealand's eagerness to use Māori culture's appeal as a tourism attraction to contribute to the industry, Western structures still remain which conflict with Māori values and beliefs and ultimately hinder Māori success (Amoamo, 2007a). Carr (2008) addresses a part of these Western structures by claiming that although tourism has economic benefits, it may be causing Māori to unknowingly place further layers of Western economic values on their land. In Wikitera's (2006) study, she identifies several barriers for Māori tourism development and success in Auckland which specifies the lack of a regional strategy that also embraces the communities, iwi and hapu. The new destination plan by ATEED claims to collaborate with Māori more and the incorporation of these values could be part of the action towards this, however at the same time mana whenua in Auckland have taken things into their own hands and formed a first of its kind iwi-led Māori tourism strategy (Ngā Iwi o Tāmaki, 2019). In 2018 a prominent iwi in Auckland, Ngāti Whātua, organised the creation of a Tāmaki Makaurau Tourism Strategy Playbook which was co-ordinated with major professional service firm KPMG. The strategy is the first of its kind for New Zealand and is under the responsibility of the new body, Nga Iwi o Tāmaki. Nga Iwi "represents a 'coalition of the willing' who have come together to take iwi-driven and iwi-led shared action to realise strategic ambitions through a 2030 Tāmaki Makaurau Tourism Strategy" (Ngā Iwi o Tāmaki, 2019, p. 7) and identifies eight mana whenua who participated out of the total 29. This is a prime example of what Espeso-Molinero et al. (2016) refer to as 'bottom up' planning, by which the community, in this case the iwi of Tāmaki Makaurau, are in charge of their development and how it is to be achieved. Overall, the plan also prioritises sustainability, as defined within a Māori framework, and aligns with the other government and industry tourism strategies. Notable initiatives in the strategy include the development of a '*Manaaki Mark*', which functions as a quality Māori tourism identifier much like Qualmark standards. Ngā Iwi also state one of their aspirational goals is to have an exclusive Māori culture centre comparable to that of the Sydney Opera House by the year 2030.

3. Indigenous tourism in the digital age

There is no questioning the level of impact which technology has had and continues to influence on the tourism industry (Buhalis & O'Connor, 2005). Information communication technologies (ICTs) have a critical part to play for the competitiveness of a destination and

the entire tourism sector as advancements in both industries are closely related (Buhalis & Law, 2008; Buhalis & O'Connor, 2005; UNWTO, 2001). Buntén (2010) notes that most Indigenous ventures are less than a decade old and have been made possible largely thanks to an increase in communications technology. Tourists now have all the information they could search for at their fingertips and tourism managers are better equipped to provide personalised experiences and react proactively to this new type of tourist (Buhalis & Law, 2008). One of the most notable changes ICTs have brought upon the tourism industry is the disruption to the traditional distribution chain. Gradually, the focus on literature has been shifting away from ICTs and disintermediation and instead looking at how it can be utilised to enhance the tourist experience (Scarles et al., 2016). Studies have covered the various digital forms and their use in tourism, such as mobile apps, and in particular augmented reality (AR) has been gaining momentum of interest in the fields of cultural heritage and urban heritage tourism (Bec et al., 2019; Cranmer, 2017).

According to Pacific Asia Travel Association (2019), new technology can be used as a solution to many problems caused by 'overtourism' by dispersing tourists out to the regions and promoting off the beaten track locations. Furthermore, they encourage that these initiatives do not have to be led from the top down. In other words, it is not just up to tourism boards and RTOs but can be individually or community driven (PATA, 2019). However, researchers indicate that AR has only gained prominence in the last 5 years or so (Scarles et al., 2016) and is still in its infancy stage of development (tom Dieck & Jung, 2018, Han et al., 2018). Furthermore, the majority of existing literature has focused on tourist adoption of AR/VR technologies (Han et al., 2018) and there is limited information on Indigenous adoption and implications, which this study aims to address.

Augmented reality

A recent increase of interest in augmented reality (AR) across various disciplines of research has resulted an equal range of definitions for the medium (Cranmer, 2017). Cranmer (2017) points out the variation in these definitions starting with one by Azuma (1997) and focuses on the features and capability of the technology linked to three aspects; combination of real and virtual, 3D visuals and are interactive in real time. On the other hand, more inclusive definitions have been suggested as a response to the previous being too restrictive, as any

technology that fuses real and virtual information in a meaningful way can be considered AR (Cranmer, 2017; Klopfer & Squire, 2008). Klopfer & Squire (2008) define AR as “a situation in which a real world context is dynamically overlaid with coherent location or context sensitive virtual information” (p. 205) and propose that AR is more than a technology, but consider it as a concept. It is important to note that often definitions only touch on the visual aspects of AR, thereby failing to recognise the full capabilities the technology holds for engaging the other senses (Cranmer, 2017). In 2001, Azuma et al. revisit the advances of AR since the first survey in 1997 and explain their new approach to defining AR, which still underpinned by the aforementioned three aspects, does not restrict it to sense of sight or display technologies. Azuma et al. (2001) acknowledge that it can appeal to all of the senses, hearing, touch, and smell, as well as being able to manipulate the environment by adding virtual objects but also removing real objects (i.e. an AR visualisation of a historic building which once stood in a certain place may block out or remove the building present in that space today).

Use of AR in tourism

Although the use of AR has generally been focused within fields such as marketing as a promotional tool and in education for teaching and learning purposes, the recognition of potential benefits which AR can provide is increasing in the tourism industry as research on the topic also grows (Bec et al., 2019; Cranmer, 2017; Jung et al., 2018; Moorhouse et al., 2017; Mortara et al., 2014; tom Dieck & Jung, 2017). In particular, there has been a concentration of studies focusing on the use of AR within cultural heritage (CH) (Bec et al., 2019; Irving & Hoffman, 2014; Jung et al., 2018; Moorhouse et al., 2017; Mortara et al., 2014; tom Dieck & Jung, 2017) and urban heritage sites (Han et al., 2018, 2014; Nóbrega et al., 2017). In a recent research note by Bec et al. (2019) they explore how AR and VR are currently used within a heritage management and preservation context in tourism. They recognise that as a result of wanting to preserve heritage for future generations in a way that encourages more engagement, tourism destinations have seen the emergence of various digital technologies. Bec et al. (2019)’s research note lobbies for the potential of technology to benefit CH sites as it can generate social, economic and environmental outcomes. Tom Dieck and Jung (2017) also argue in favour of AR in a CH tourism context as it allows experiences to change from being primarily marker-based to marker-less with the new ability to apply digital overlays to

real world settings. This is an important point for CH experiences as the sites are often restricted in terms of developing physical additions in the interest of preserving the site itself (tom Dieck & Jung, 2018). For this reason among others, it is argued by several academics that CH tourism is the main sector within the industry that is served by AR apps and there is a general consensus that this technology can aid in the preservation of the cultural sites and artefacts (Jung et al., 2018; Moorhouse et al., 2017; Mortara et al., 2014; tom Dieck & Jung, 2018).

With the increase in interest, there has been a variety of AR apps developed within the CH and urban heritage context to improve the tourist experience (Jung et al., 2018). As AR comes from a strong background in education, it is understandable that this is a common theme for how it is also experienced in tourism. While most AR education apps have been concentrated in the realms of science, there is growing recognition of its value in social science subjects. Kysela and Štorková's (2015) study focused on its use in terms of effectiveness, attractiveness and potential for teaching tourism and history despite the lack of attention these areas receive within education from AR developers. They believe that history is not something to be just be consumed and that place history should be in the knowledge base of every adult within each nation. Similarly, Harley et al. (2016) investigated the use of AR in the context of learning history in a tertiary environment. Their findings support that it is effective in achieving the set learning objectives of the study in an enjoyable way by viewing multimedia representation (AR) within the very context it belongs to.

Learning via mobile AR games has also shown its ability for fostering engagement at tourist destinations with gamification of content and use of storytelling techniques (Nóbrega et al., 2017). Mortara et al.'s (2014) study extensively covered the available range of 'serious games', or games with an educational purpose, specifically for learning cultural heritage. Adventure games in particular are designed for learners to construct knowledge while also completing a meaningful activity. So as Mortara et al. (2014, p. 321) describes it, "the learner does not passively receive information but rather actively constructs new knowledge by finding information in the game, understanding it and then applying the new knowledge to fulfil tasks". In research looking at Aboriginal use of games designed for Indigenous knowledge found that the younger participants were motivated by game-like tasks whilst the older generation was interested in tribal stories, language and traditions to be able to pass the

knowledge onto the next generation (Wyeld et al., 2007). Not only have AR games shown to encourage tourists' learning and engagement, it has also enhanced the overall experience, creating environments for increased immersion through deepened engagement (Bec et al., 2019; Harley et al., 2016; Jung et al., 2018; tom Dieck & Jung, 2018).

Indigenous use of AR in tourism

Storytelling in traditional oral forms is a common practice across most Indigenous cultures and is often featured as part of the tourism product for visitors. Unsurprisingly, digital platforms such as AR have increasingly become a tool utilised by Indigenous peoples as another means of telling stories, sharing beliefs and communicating traditional knowledge (Adelson & Olding, 2013; Beltrán & Begun, 2014; Cunsolo Willox et al., 2013; Hopkins, 2006). As Hopkins (2006) sees it, Indigenous people are continuing to do what they have always done, making things their own. Communicating knowledge through an imagery of words and taking advantage of the technology available to do so is just an extension of this traditional practice (Hartsell, 2017). Smith (2012) argues that storytelling "should be respected as a way of sharing lived experiences, exploring personal beliefs and values, and discovering place based wisdom" (Cunsolo Willox et al., 2013, p. 133). Furthermore, it also links community narratives with stories of the individuals living within it (Cunsolo Willox et al., 2013).

Due to the rapid urbanisation of Indigenous people within the last century alone (Ryks et al., 2014), multiple Indigenous communities are experiencing a loss of traditional knowledge, including language, cultural practices, and history, as their elder generation is passing away and the source of knowledge with them (Cunsolo Willox et al., 2013). Participants in the studies of Beltrán and Begun (2014), which is within a Māori context, and Cunsolo Willox et al. (2013) both saw digital storytelling as mirroring oral traditions as an appropriate way to record the invaluable Indigenous knowledge lost with the elders when they pass. Furthermore, because history is told according to those in power, digital storytelling provides an opportunity for the other side to share their history which for Indigenous people often includes land confiscation, discrimination and forced assimilation (Bec et al., 2019; Hillmer-Pegram, 2016). Bec et al. (2019) state that a key issue is being able to balance contested history with known facts but that it can result in a memorable experience for the user by incorporating both sides to the story. It is almost important for Indigenous to retain control

over how they are represented in these stories and what is shared (Cunsolo Willox et al., 2013), as discussed earlier in the context of image representation, as Wyeld et al. (2007) warns that inaccurate storytelling can potentially be harmful for the environment they refer to.

Digital storytelling is also important in reshaping and reconnecting to the Indigenous identity that may have suffered as a result from urbanisation and internalised colonisation, which in itself has Indigenous youth of today believing negative perceptions and racist stereotypes of their own culture (Beltrán & Begun, 2014; Wyeld et al., 2007). Cunsolo Willox et al. (2013) describe the depth of the storytelling experience via a digital medium provides by stating that “as with oral storytelling and remembering, digital storytelling provides the platform for people to not only remember their roots but also to connect to themselves, their histories, their ancestors, and their culture through stories and video” (p. 135). Thus, it has transformed into a powerful tool for empowerment of *tino rangatiratanga*, or self-determination, for overcoming negative stereotypes and undoing preconceived ideas of self-image and worth (Wyeld et al., 2007).

For many Indigenous communities, their ideologies are similar in the fact that they have a strong connection and sense of belonging to the land and natural environment. AR provides the opportunity to overlay integration of traditional Indigenous knowledge to holistically combine different aspects of the world as Indigenous interpret it, such as spoken language, traditional music and other aesthetic elements (Mortara et al., 2014). These abilities makes a case for AR to be used as a powerful tool for context based learning and education. While some may disagree with having technology present in nature to feel connected and immersed, there are several studies that show context-based digital experiences do increase connection, immersion and engagement with the environment and content (Harley et al., 2016; Nóbrega et al., 2017; Wyeld et al., 2007). Furthermore, Wyeld et al. (2007) argue that the environment is not just a passive backdrop, but instead it is an active participant which aids in the telling of the story. In Western Australia, Irving & Hoffman (2014) conducted a pilot project that involved AR and Indigenous digital storytelling in collaboration with the Aboriginal Nyungar people. They had elders record stories relating to place based narratives and the app was used as supplementary course content for first year university health science students, the specific aim of which was to increase their cultural awareness. The findings of the study show

that AR is capable of providing an authentic context based learning experience, and the authors pose the question for future research of how the experience could be repurposed for the benefit of cultural tourism, as there was higher engagement recorded by international students (Irving & Hoffman, 2014).

Likewise, Beltrán and Begun's (2014) study also found that digital storytelling promotes cultural and contextual understanding while using engaging, innovative and modern technologies to facilitate oral traditions. Other research found that participants liked being able to access the platform at any time which enabled them to learn at their own pace in a more enjoyable way, collecting as much or as little information as they wished (tom Dieck & Jung, 2017), and found it more moving to hear the emotions in the voice versus viewing static content (Cunsolo Willox et al., 2013). Although the younger generation is more attracted by gamification aspects of AR, tom Dieck and Jung (2017) highlight the general recognition AR has received for its enhancement of cultural and historical value to all age groups.

Māori are increasingly using digital technology as a tool to support their own agendas, especially in preservation of and connection to culture. The Centre of Research Excellence for education stated in the context of describing a project to improve digital literacy Māori schools that, “while holding steadfast to tradition, Māori have long embraced technologies, whether they have been used in the whare or on the marae to nourish, create shelter, warmth and protection for their people”. A few examples of this outside of tourism include a comprehensive online map marking the marae across New Zealand to reconnect young Māori to their ancestral identities (Te Ao Māori News, 2017) and Spark, the telephone network company, digitally sharing the stories of the stars of Matariki, Māori New Year (Smith, 2019). Spark bring these immersive stories to life and their wellbeing and environmental significance through recordings which can be accessed via phone call or online streaming services (Smith, 2019). A few tourism apps for New Zealand have already been developed such as the Tuhura app which uses GPS to show video content relating to the history of the place (Tuhura, 2018) and the travel companion app by rental company Mighty (*THL Roadtrip App*, n.d.). Tourism New Zealand (TNZ) also launched an official app in 2013 in response to “a rapidly rising number of tourists travelling with smartphones” and a 250% increase of traffic to the mobile TNZ website from 2012 to 2013 (NZ Herald, 2015).

The increase of interest into utilising digital tools to enhance customer experience has also resulted in ventures into the AR market within New Zealand. In 2018, an AR app was launched in Rotorua to let tourists experience a digitally recreated version of the Pink and White terraces in order to “bring the terraces back to life” (Flahive, 2018). Air New Zealand have also developed a demo AR boardgame, that involves a headset, to feel out its potential for reimagining inflight entertainment, however at this point it will not be inflight ready for another few years (Keall, 2019). Auckland, being New Zealand’s innovation and technology hub (ATEED, n.d.), also has a few examples of AR app development within the region. For the 2018 Auckland Heritage Festival, an audio-visual AR tour of ‘Uptown’ led locals and tourists alike around the Mount Eden area with nine spots accompanied by a story relating to the history of the site (Auckland Council, 2018). The general manager of the Uptown Business Association described it as “a fresh, unique experience and a chance to discover our local history in a fun and engaging form” (Auckland Council, 2018). In 2019, ATEED and the DOC collaborated in 2019 to launch the world’s first trilingual nature app in English, Te Reo Māori and Chinese (Department of Conservation, 2019). Although it does not have AR features, it is worth noting as its purpose is to promote the natural diversity of Tāmaki Makaurau and help non-Māori speakers with their pronunciation of place names, species and spaces (Yinglun, 2019).

A PhD project involving Papakura Marae produced an augmented and geo mobile experience for the use of the iwi members whereby an app with location markers around the site held information such as “archival photos, videos of stories told by Marae founders, information about protocol and historical-cultural information linked to carvings and other taonga” (AwhiWorld, n.d.). Another non-tourism focused app along the same lines as ‘AwhiWorld’ is ‘Journeys of Manu’ which was designed for community events to bring mātauranga (knowledge) Māori to life while encouraging physical activity and was a first of its kind for the region (Stuff, 2017). Journeys of Manu follows a scavenger hunt format where each marker corresponds to a statue and when activated the AR character Manu is projected onto the real environment through the user’s phone camera view to tell different stories of Maramataka, the Māori moon cycle. Ngāti Whātua Ōrākei launched an AR self-guided tour in 2018 on their ancestral land at Bastion Point which featured markers that when activated by the phone would unlock a story told through visual and audio effects (Williams, 2018). A similar app was

also developed and was launched in 2017 in the region of Tauranga, except it only utilises audio stories (Coleman, 2019).

Despite the studies with favourable results concerning the use of AR, its development is still in the early stages (Han et al., 2018; Jung et al., 2018) and so understandably, there are challenges that inhibit its full potential. Several authors note that there are still some technical issues that need to be overcome for wider adoption of AR to be integrated into common public use (Cranmer, 2017; Kounavis et al., 2012; tom Dieck & Jung, 2018). These concerns include the user design and accuracy not being a smooth experience (Nóbrega et al., 2017), perceptions on the ease of use and the influence it has on intent to use (tom Dieck & Jung, 2018), and possibly the biggest barrier to wider adoption is internet connectivity (Cranmer, 2017; Kounavis et al., 2012). Considering the intended use is within a tourism context, it is important to relate these barriers to how tourists expect to experience and use technology. Tom Dieck and Jung (2018) found that young British tourists using a cultural urban heritage AR app for Dublin were more inclined to use it if it was across a range of attractions or cities as it increases the perceived usefulness of the app. Furthermore, as internet connection is one of the basic requirements for most AR apps, it may prevent tourists using and downloading the app due to data roaming costs although Nóbrega et al. (2017) state that these prices are falling globally and will facilitate use of AR for tourists going abroad. Also, it is possible for these apps to function without the use of internet connection once downloaded as demonstrated by the location based New Zealand Tourism and THL apps (NZ Herald, 2015; *THL Roadtrip App*, n.d.). Lack of formal evidence is another main barrier for AR adoption within the education sector which has been heavily focused on in research of AR (Kysela & Štorková, 2015), and so even less is available for the tourism industry despite the recent growing body of literature, knowledge on mobile AR is still in its infancy (Nincarean et al., 2013).

From an Indigenous perspective, the issues more so pertain to the content being used and how that information is shared (Adelson & Olding, 2013; Cunsolo Willox et al., 2013). It includes having to balance contested information, or lived experiences, with known facts of history, as it often relates to sensitive memories or events whose narrative is often positive towards actions of the colonisers (Beltrán & Begun, 2014). Adelson and Olding (2013) also warn that present Indigenous knowledge through a digital medium runs the risk of

decontextualizing the content through loss of direct social interaction. In this way, the method of knowledge transfer is at odds with oral traditional as the users' connection to the narrator is only through the digital and so the context of the story's significance may be lost.

Conclusion

To summarise, the existing literature shows several disconnects between the way in which tourism has traditionally been developed, the current focus on sustainability and what Māori consider to be sustainable development. The overview of early research demonstrates that the inequity which Indigenous people experience in other areas of life also translates to how they are treated as recipients of government policy and planning. Further research conducted within the Indigenous tourism context shows that true sustainable development requires a 'bottom-up' approach that empowers the community to enhance wellbeing as they define it. For Māori, commerce involves a fourth bottom line which prioritises people and place over profit. This review also covers the shift in New Zealand's tourism industry and government strategies which prevalently focus on kaitiakitanga and conservation of natural resources and Māori culture. The second section to this literature review briefly discussed the history of technology and tourism before looking at specific examples of AR in cultural, urban and/or Indigenous contexts. It also outlined the ways in which Indigenous people are utilising AR or similar technology for cultural sustainability and wellbeing outcomes. Although the potential of AR in Indigenous tourism is promising, there remain several barriers to its development and adoption by the industry.

CHAPTER THREE: Methodology

Introduction

This chapter will outline the theoretical positioning of this study and the methods which were used. Firstly, it explains Kaupapa Māori theory which provides the philosophical foundation of the research and is then related to the chosen Māori-centred methodology. It then details the qualitative methods for participant recruitment, data collection and data analysis. Subsequently, it addresses how the relevant ethical considerations, those of a Western institution as well as te ao Māori, were applied and maintained throughout the study. Finally, it concludes by drawing clear connections between the chosen methodology and its appropriateness for the purpose of the research.

Kaupapa Māori Theory

This research used a qualitative Māori-centred methodology which draws strongly on Kaupapa Māori theory. Briefly explain

Kaupapa Māori theory developed as a response from Māori to “resist, and transform the crises of...ongoing erosion of Māori language, knowledge and culture as a result of colonisations” (Smith, 1997). Smith (1999) acknowledges that research cannot be separated from its ties to power and control, and therefore asserts that Indigenous research is an important part of the decolonization process.

Linda T. Smith’s (1999) fundamental work, *Decolonizing Methodologies: Research and Indigenous People*, argues that Western research plays an influential role in maintaining colonial power over Indigenous peoples by marginalising their knowledge (Smith, 1999). The last few centuries have seen Western academia continue to empower the non-Indigenous world as the interest of researchers and groups have been closely affiliated to the outcome and benefits of the studies (Porsanger, 2004). Porsanger (2004) lists some of these benefits to be “academic and political careers, economic and professional gain, the profitable use of Indigenous territories, natural resources and Indigenous knowledge” (p. 108). Smith (1999) describes Western academia’s approach to research on Indigenous peoples as aiming to address the ‘Indigenous problem’, which she asserts stems from “racism, sexism and other forms of positioning the Other” (p. 90). For this reason, Smith is famously quoted as describing

research as “...one of the dirtiest words in the Indigenous world’s vocabulary” (p. 1). This has been reinforced with hundreds of years of research being carried out *on* and *about* Indigenous peoples of which the majority has excluded them from meaningful participation and being able to reap the benefits of the study (Pere & Barnes, 2009). Furthermore, this alienates those being researched from benefiting from the outcomes of the study, and thus there is a widespread distrust amongst Indigenous groups of researchers (Te Awakotuku, 1991).

While other Western approaches share similar goals to Kaupapa Māori of emancipation through the critiquing of oppressive, dominant structures (Foley, 2003), they remain grounded in Western philosophy (Pihama, 2001; Smith, 1999). Pihama (1993) states that:

...intrinsic to Kaupapa Māori theory is an analysis of existing power structures and societal inequalities. Kaupapa Māori theory therefore aligns with critical theory in the act of exposing underlying assumptions that serve to conceal the power relations that exist within society and the ways in which dominant groups construct concepts of ‘common sense’ and ‘facts’ to provide ad hoc justification for the maintenance of inequalities and the continued oppression of Māori people (p. 57).

Staniland (2017) points out that although Western research paradigms such as postcolonialism, feminist, and critical theories, can be utilised for advancing the Māori agenda, “they are not sufficient in themselves to form a basis for Kaupapa Māori” (p. 92). Bishop (as cited in Smith, 1999), agrees with this and suggests the emergence of new and alternative Māori approaches to research is a reflection of resistance to critical theory. As a consequence of their Western-centric social, cultural and political foundations, they fail to adequately consider the lived experiences of Indigenous groups, such as Māori, and the implications of their unique cultural epistemologies (Pihama, 2001). Furthermore, Cooper (2012) explains the conflicting position in which Kaupapa Māori is placed “in its need to stand apart and unconstrained by Western science in order to centralise Māori epistemologies and knowledge, while simultaneously drawing from ancestral knowledge and legacies to critically engage with modern science” (Staniland, 2017, p. 92).

The importance of culturally sensitive research is emphasized by Crazy Bull (1997) who asserts that “continuing our use of Western methods would separate us from our understanding; knowledge would be external rather than integrated into our lives if we do not put our own tribal mark on research” (p. 19). Contrary to the arguments presented above, according to Smith, Kaupapa Māori can be understood as a ‘localized’ version of critical theory where

“oppressed, marginalized and silenced groups”, in this case Māori, aim to achieve similar outcomes by taking “greater control over their own lives and humanity” (Smith, 1999, p. 186). Smith (1997) and Pihama (2001) take this further by stressing the ability of Kaupapa Māori to stand independently and without connection to any Western theory. Porsanger (2004) describes Māori cultural principles and protocols utilised in Māori studies, essentially the development of Kaupapa Māori methodology, as an example of Māori placing their ‘tribal mark’ on research. As such, Pihama (2001) states that “Kaupapa Māori theory...challenges the oppressive social order within which Māori people are currently located and does so from a distinctive Māori cultural base” (p. 6).

The emergence of Kaupapa Māori theory was a result of increased acquisition of education among Māori following the rapid urbanisation and its negative consequences following the second World War (Durie, 2012; Walker et al., 2006). The growing Māori political and social consciousness of the 1970s also marked the birth of Kaupapa Māori, which was a response to dissatisfaction in the way Western academics conducted, analysed and presented research involving Māori (Pere & Barnes, 2009; Walker et al., 2006). In Te Awekotuku’s (1991) discussion paper on the ethics of research in Māori communities, she indicates that while centuries of exploitative objectification through research has produced a substantial amount of knowledge about Māori, it has failed to deliver the benefits to these communities, resulting in the distrust of Western researchers. Mikahere-Hall (2017) justifies this response as constant misrepresentation by Western research practices and their analysis of Māori reality which often contributed negative findings has left them with “[a] prevailing sense of mistrust and wariness” (p. 3). Thus, she simply describes the development of Kaupapa Māori as a means for Māori researchers to assert their right of tino rangatiratanga (self-determination) by maintaining control over the research process and the subsequently produced knowledge which is based on needs that stem from within the Māori community itself (Mikahere-Hall, 2017).

Kaupapa Māori has been discussed and defined as a theory, a methodology, and approach, however it is most commonly and succinctly referred to as the Māori way (Cram, 2017). Barbarich (2019) describes this as an approach which focuses on the strengths of the Māori methods where Māori are leading the way. That is, “Māori design, plan, gather data, analyse, and write up the research” in a way that is appropriate to Māori tikanga (protocols) and

cultural values (Walker et al., 2006). Unlike the established structures or methods attached to other non-Indigenous methodologies, Kaupapa Māori is based on core Māori principles and does not have a ridged design, therefore leaving it up to the interpretation of the individual(s) employing this approach to determine how they are to fulfil the principles (Smith, 2012). While there is no set definition, the varying available explanations can be grouped by the common theme of ‘ka piki te ora o te iwi Māori’ (Walker, 1999, as cited in Herbert, 2001), or research which has beneficial outcomes for Māori. In essence, Smith (1999), who has contributed an expansive amount of discussion on this topic, summarizes Kaupapa Māori research as:

- Linked to being Māori
- Associated with Māori philosophy and values
- Highlights the validity and legitimacy of being Māori
- Highlights the importance of te reo Māori and culture and
- Addresses the struggle for control over Māori cultural wellbeing

A key benefit of using Kaupapa Māori when working on research with Māori is its ability to prioritize Māori epistemology, knowledge, culture and values without requiring it to answer to the restrictions for Indigenous peoples present in Western methodologies (Mahuika, 2008). It is often disregarded and marginalised in Western knowledge, an issue which Kaupapa Māori aims to address.

By drawing from mātauranga Māori as the foundation for research, it protects those involved with a culturally safe process (Pihama, 2010). Furthermore, Barbarich (2019) states that this essential intervention of how understanding about Māori is formed “has allowed for healing to begin and Māori obtaining control and power over their wellness” (p. 38) within a post-colonial environment. According to Smith (1999) it attempts to represent the experience of marginalisation in authentic and genuine ways.

The emergence of Kaupapa Māori justifies the need for Māori research which legitimizes Māori knowledge and places their values, needs and aspirations in the centre of such studies (Walker et al., 2006). As such, Western theoretical frameworks comparable to Kaupapa Māori, namely postcolonialism, feminist, and critical theories, are unsuitable for this research as they focus on the West and its relationship to others (Staniland, 2017). Furthermore, these

theories do not account for the cultural nuances of and differences faced by Māori, which explains Smith's (1999) description of it being a localized version of critical theory. Furthermore, in Jackson's (2015) dissection of Kaupapa Māori and critical discourse analysis (CDA), she points out that CDA research is transdisciplinary, much like Kaupapa Māori. As Fairclough (2005) outlines, transdisciplinary research has the ability to blend other theoretical frameworks and methods to "create a constant dialogue between the disciplines" (Jackson, 2015, p. 259). This is particularly of relevance to this study as it involves looking at AR and Māori tourism, incorporating three separate yet overlapping disciplines of tourism, education and technology.

Drawing on Kaupapa Māori theory is imperative for this study which aims to understand the experiences of and support Māori tourism development. It was also chosen due to my positioning as a "Māori researcher", instead of a researcher who happens to be Māori. This distinction is important to make as Irwin (1994) explains that Kaupapa Māori research requires a researcher who identifies as such in order to maintain a culturally safe process, and what others would describe as an insider role (Rewi, 2014, Smith, 1999). This impacts the overall design of the study as it is influenced by my Māori-specific understandings of the world and places me in a position of privilege by which I have access to deeper levels of information through my whakapapa (Rewi, 2014). While a privilege, this also presents the dilemma which other Indigenous researchers commonly face, myself included. Smith (1999) explains:

There are a number of ethical, cultural, political and personal issues that can present special difficulties for Indigenous researchers who, in their own communities, work partially as insiders, and are often employed for this purpose, and partially as outsiders, because of their Western education or because they may work across clan, tribe, linguistic age and gender boundaries. (p. 5)

As such, I am not only accountable for the consequences of this research but my whānau and Māori community must also live with the impacts of these chosen processes on a daily basis (Smith, 1999).

Māori-Centred Research

As described in this chapter, Kaupapa Māori takes on many forms and articulations in Māori research. This study in particular adopted a Māori-centred methodology drawing on Kaupapa

Māori theory, terms which researchers have used interchangeably. According to Durie (1997), a “Māori-centred approach locates Māori at the centre of research, knowledge, and development generally, rejecting the practice of simply adding on a Māori perspective as some fashionable extra” (p. 2). On the other hand, Cunningham (2000) and Te Ara Tika: Guidelines for Māori Research (Hudson et al., 2010) characterize Māori-centred by ranking it as ‘good practice’ against Kaupapa Māori which is considered ‘best practice’. Cunningham identifies the distinguishing factors between the two as relating to differences in research standards and control. He states that in Kaupapa Māori, the control remains in Māori organisations, whereas with Māori-centred research, the standards and control are Pākehā organisations (Cunningham, 2000). Herbert, (2001) argues there is a need for “Māori research based in Western institutions and imbued with Western notions regarding research processes” (p. 19) and is in fact the reality of Māori researchers.

Therefore, so as to not take away from the purpose of Kaupapa Māori methodology being by Māori, for Māori and in consultation with Māori, this thesis positions itself using the Māori-centred approach. This is to acknowledge the influence of the Western institution from which it is produced (Cunningham, 2000) and due to the changing nature of the thesis since its commencement, there could have been more consultation pursued with kaumatua to ensure the research problem was truly reflective of the communities’ needs. The following section will explain the principles of Māori-centred research which informed the study design in a way to uphold the mana of participants and align with kaupapa methodology values.

For the purpose of this study, the framework created by Durie (1996) will be used to define Māori-centred methodology. This particular version was developed from Māori health research which produced key themes to guide this field of study and activities involving Māori. These are:

Table 1*Māori-centred Principles*

Whakapiki tangata	Enablement, enhancement and/or empowerment of Māori
Whakatuia	Recognition and engagement of holistic Māori worldview and the complex relationships between past and present, individual and collective, the body, mind and soul, people and their environment, political power and social and economic spheres
Mana Māori	Full involvement of Māori in the research through assertion of tino rangatiratanga. By Māori, for Māori approach

Note: Adapted from *A framework for purchasing traditional healing services: A report prepared for the Ministry of Health*, by M. Durie, 1996, Massey University. Copyright: In the public domain.

Whakapiki Tangata

The principle of Whakapiki Tangata prioritises the necessity of the research to provide benefits back to te iwi Māori, and particularly the Māori communities directly involved. The response to the mistrust caused by Western researchers has been the development of Indigenous methodologies where tangata whenua researchers are equipped with an approach guided by their unique tribal protocols (Smith, 1999). Therefore, enabling them to empower their own communities by giving them a voice through means which are determined by themselves to be culturally safe and appropriate (Mertens et al., 2012). Thus, this study was designed to be accountable to this principle, and to the Māori community, by contributing knowledge which is created in collaboration with and for the benefit of Māori (Moewaka-Barnes, 2000). It aimed to do this by placing Māori needs and advancing Māori aspirations as the research foundation by “deliberately [placing] Māori people and Māori experience at the centre of the research activity” (Durie, 1997, p. 9).

Whakatuia

The second principle, Whakatuia, refers to the holistic Māori paradigm and is reflected in its direct translation meaning ‘to bind together’. This principle recognises the Māori perspective

by which the natural order of the universe is interconnected and woven together through the concepts of whakapapa, mana and kaitiakitanga, or what the Western world may characterize as a universal ecosystem (Harmsworth & Awatere, 2013). This worldview also encapsulates the realisation by Māori that changes in the mauri (life force/essence) in any part of the environment has a chain effect which impacts the mauri of directly related elements (Harmsworth & Awatere, 2013).

Mana Māori

Finally, Mana Māori is generally defined by Durie (1997) and Forster (2003) as drawing from tino rangatiratanga, the principle of self-determination, and “refers to the level of control that Māori have over the research process, including the planning, design and execution of the project and dissemination of the research outcomes” (Staniland, 2017). This research has been designed as guided by the principles of Kaupapa Māori theory, which prioritises the right of Māori to assert autonomy over this process, and influenced by a primary supervisor who is of Māori ethnicity and descent. The secondary supervisor of this project, although Pakeha, has an extensive background in bicultural and Māori research, and as the primary researcher, I am familiar with tikanga Māori due to my own Māori whakapapa. I recognise that the primary purpose of this research is to complete the requirements of a master’s qualification and therefore is ultimately accountable to research standards determined by mainstream academia.

The Kaupapa

As explained, a Kaupapa Māori perspective requires the research to stem from and be accountable to the community its intending to serve, instead of contributing to what Smith (1999) refers to as the Western obsession of problematizing Indigenous peoples. After further research into Māori tourism development in Tāmaki Makaurau, it was found that a few Māori businesses were already implementing AR and VR elements into their tourism experiences. These new forms of ‘marker-less’ information points provide an environmentally friendly and novel way for people to engage with Māori culture, and is currently being used in education and tourism amongst other sectors (tom Dieck & Jung, 2017). Therefore, this study aimed to

explore the following research question: How can AR support sustainable Māori tourism development in Tāmaki Makaurau?

A secondary literature search revealed that mixed realities, including AR and VR experiences, are being adopted in cultural heritage sites for their minimal physical impact as well as their educational and engagement value (Bec et al., 2019; Cranmer, 2017; tom Dieck & Jung, 2017). Research focusing on AR/VR and Indigenous use in tourism has found that it aligns well with their common view on sustainable resource use as well as oratory traditions, or storytelling. This informed the research objectives of this study which were to investigate:

- How do cultural AR tourism experiences align with te ao Māori?
- How does Māori tourism delivered through AR support sustainable development?
- What opportunities are available for AR Māori cultural tourism in Tāmaki Makaurau?

Methods

Qualitative Interviews

This study employed a qualitative method using one-on-one interviews. The purpose of this research required the expertise of current Auckland Māori tourism developers, operators and app developers to draw on their experiences in order to be able to offer insights on how emerging technologies could further support Māori tourism development in Tamaki Makaurau. Thus, qualitative interviews were used because of its ability to provide rich and in-depth data (Gill et al., 2008), which is valuable in social research. Furthermore, qualitative research aligns well with the Māori way of doing research through use of hui which require tikanga and values such as '*kanohi ki te kanohi*', or the seen face (Walker et al., 2006), which supports Kaupapa Māori theory (Bishop, 1996).

Gill et al. (2008) define the purpose of interviews in research is to be able to “explore the views, experiences, beliefs and/or motivations of individuals on specific matters” (p. 292). Gray (2014) notes that in cases where highly personalised data is required, interviews are the recommended approach through which meaning and perceptions can be discovered. Gill et al., (2008) corroborate this statement in saying that a deeper understanding can be achieved

by means of detailed insights from individual participants that are otherwise lost in quantitative methods such as questionnaires.

The interviews followed a semi-structured technique with open-ended questions in order to pursue viewpoints on specific issues relating to the overall research aim but also allow the participants to expand on their responses (Gray, 2014). By ensuring the important topics are covered through prepared questions and probing, further thought or explanation of the participant's answers using unplanned questions provides an in-depth view and understanding of the experience (Gray, 2014; Bryman, 2012). The predetermined open-ended interview questions were developed considering the descriptive interpretive approach, meaning they were constructed to elicit responses regarding the research question by allowing the interviewee to provide in-depth answers (Eriksson & Kovalainen, 2015; Smythe, 2012). Furthermore, using open questions prevents respondents from providing answers based on suggestive questioning and as a result allows unforeseen responses to be derived (Bryman, 2012).

Participant Recruitment

Participants were recruited primarily through a purposive sampling technique and were identified and approached to participate via email, with the exception of one person who was referred by another participant. This sampling method was used to seek out individuals specifically for their expertise in, or connection to, Māori tourism development in Auckland and/or AR app development experience (Smythe & Giddings, 2007). Approximately 35 individuals were approached for an interview however only eleven interviews could be undertaken due to a variety of reasons including unwillingness to participate, unresponsiveness, and time/location constraints, with a few key operators being unable to step away from work as they are family run businesses with limited resources.

The sample was made up of eight Māori operators, five of which have experience in developing an AR app, and three non-Māori, a tourism developer and two others also with experience in developing an AR cultural app.

In the email, participants were informed about the study in the participant information sheet as well as the consent form (see Appendix C). Three of the individuals were already known personally to the researcher through past industry connections, while the rest of the respondents had not met with the researcher prior to the interview. The following section outlines the background information of participants and provides additional context about those involved in this research.

Background information of the interview participants

Participants were identified using purposive sampling based on their expertise of tourism development in Tāmaki Makaurau and/or experience with Indigenous digital platforms.

The eleven participants involved in this research were from a range of professional backgrounds including Māori tourism operators, tourism development managers, iwi-owned businesses, academic researchers, and founders of digital Māori platforms. Several participants have multiple roles across these categories and further description is provided in Table 2. The iwi affiliations for each participant are also included where applicable to see if there were differences in perspectives between iwi, however no differences were identified.

Of the total eleven participants, six were directly involved in developing an AR app with Māori cultural elements. Five of these participants whakapapa Māori as well as own their respective platforms as part of bigger initiatives. At time of writing, the current state of each Māori AR app included in this study are in different stages of development.

Table 2:

Descriptive data of interview participants

#	Area of Profession	Iwi	Location	Experience with an AR platform?
P1	<ul style="list-style-type: none"> Māori tourism operator 		Rural Tāmaki Makaurau	
P2	<ul style="list-style-type: none"> Extensive experience at RTO: Head of Tourism. Venturing into Māori tourism programme for youth 		Tāmaki Makaurau	
P3	<ul style="list-style-type: none"> RTO Māori Development Specialist Non-practising professional in Māori health Venturing into Māori tourism business (outside of Tāmaki) 	Tuhourangi-Ngati Wahiao	Tāmaki Makaurau / Rotorua	
P4	<ul style="list-style-type: none"> Iwi: Business Manager 	Ngāti Whātua Ōrākei	Tāmaki Makaurau	x
P5	<ul style="list-style-type: none"> Iwi: GM of Culture and Identity Iwi: Innovation Officer 	Ngāti Whātua Ōrākei	Tāmaki Makaurau	x
P6	<ul style="list-style-type: none"> Senior Digital Innovation Advisor at university 		Tāmaki Makaurau	x
P7	<ul style="list-style-type: none"> Co-founder/CEO of Māori AR platform 	Ngāti Mutunga, Te Āti Awa, Ngāti Tama, Ngāti Whātua, Te Rarawa, Ngāpuhi, Tainui	Tāmaki Makaurau	x
P8	<ul style="list-style-type: none"> Co-founder/CEO of Māori AR platform Director for Māori Health Research Centre at university 	Ngāti Te Ata, Te Arawa, Ngā Puhi	Tāmaki Makaurau	x
P9	<ul style="list-style-type: none"> Executive director at iwi establishment 	Ngai Tai ki Tāmaki	Tāmaki Makaurau	
P10	<ul style="list-style-type: none"> Professor in Aotearoa/New Zealand history 		Tāmaki Makaurau	x
P11	<ul style="list-style-type: none"> Founder/CEO of Māori tourism app 	Ngāti Awa, Ngāi Te Rangi, Tūhoe, Ngāti Porou	Tauranga	x

Data Collection

A total of eleven interviews took place between July and September 2019 and all interviews were conducted '*kanohi ki te kanohi*' with the exception of one via Skype video call and another a phone call due to difficulties in arranging a time for both parties to meet. The interviews ranged in duration from 40 minutes to 2 hours, with an average of 80 minutes across all participants, and were audibly recorded as well as notes being written. Participants were given an indication of how long the hui was expected to last, 1hr – 1.5hr, however the time for the interviews was not pressured so as to uphold their personal mana in accordance to Kaupapa Māori ethics (Hudson et al., 2010). This allowed participants the opportunity to share as much as wanted to about their experience without being cut off early. The interviews were personally transcribed verbatim by the primary researcher and the transcripts were then read while listening to the audio in order to ensure accuracy.

Māori tikanga was adhered to in the hui through use of karakia, mihihihi, whanaungatanga and koha. Apart from one exception, the interviews opened with a karakia followed by sharing of mihihihi and whanaungatanga which allowed us to connect through whakapapa, whether personal or professional, and is crucial for building relationships and trust (Wirihana, 2012). Only one interview, that which took place over phone call, did not start with karakia and mihihihi due to the short timeframe the participant was available for. However this particular person had been referred by another participant to contribute to the study and felt comfortable to bypass these tikanga given the circumstances of the time constraint. Each participant was also thanked for their time with a kai voucher and handmade gift as koha.

Data Analysis

The analysis of the data was approached using thematic analysis. This procedure was chosen due to its flexible nature and ability to provide a rich and comprehensive account of data (Braun & Clarke, 2006). Furthermore, it is a foundational method that can be used in conjunction with a range of methodologies and is useful for identifying patterns in data (Braun & Clarke, 2006; Gillham, 2008). Terry et al. (2017) also point out that it is a way to keep the content meaningful without having to refer back to the raw data.

Mātauranga Māori, which underpins Kaupapa Māori theory, was used to guide the data analysis and results by interpreting them through a Māori worldview, weaving relevant pieces of the shared knowledge together into themes. The 'Koru of Values' (see Figure 1) developed by McIntosh et al. (2004) was used to organise the relevant parts of the transcriptions related to the research aims under headings.

The themes and categories were then compared back to the coded features to ensure they represented the data coherently, and were named as deemed appropriate. The themes were determined not based on how many times they were mentioned in the data sets but on how it captured something of importance to the research question (Braun & Clark, 2006). From this stage, the categories within the themes were then arranged and labelled into sub-themes through logical groupings to give structure to the larger themes (Braun & Clarke, 2006). The use of themes and sub-themes was to not only make the data easier to discuss in sections for the findings of the study but also to make it easier for the reader to understand the essence of the individual interviews without needing to read the raw data themselves (Braun & Clarke, 2006; Terry et al., 2017).

Limitations

The limitations of this study is that only a small sample size was used due to amount of time required to conduct the interviews, transcribe and analyse for a master's thesis. While the participants were chosen due to their perceived knowledge on the research topic, the results cannot be statistically representative of the general population. Another limitation which impacts the applicability of results is the semi-structured interview style that was used. This meant not all participants were asked the same questions but instead the interview was followed the direction of the korero. Finally, Kaupapa Māori is a methodology which can be interpreted and applied in many different ways, depending on the researcher, and therefore the analysis and results cannot be exactly replicated.

Ethics

This research was approved by the Auckland University of Technology Ethics Committee (AUTEC) on 10 September 2018. Ethics application 18/366 Māori-Centred Tourism Supporting

Development in Tāmaki Makaurau (Appendix A). AUTECH require the main ethical considerations of informed consent, right to withdraw at any time, confidentiality and anonymity, and the intent to do no harm. All of which were complied with in conjunction with Kaupapa Māori specific ethical considerations. Each participant was provided with the participant information sheet and consent form (Appendix B & C) prior to the interview. Participants also had the opportunity before the formal part of the interview took place to ask any questions and receive clarification on the research and their role in it. Throughout the research process, ongoing verbal consent was sought.

Participants were given the option to remain anonymous and in such cases, any sensitive or identifying information was rephrased or redacted to protect their privacy.

Kaupapa Māori Research Ethics

Due to this study employing a Kaupapa Māori approach and involved Māori participants, it is important to note that there was a responsibility to also uphold the cultural ethics which accompany research of this nature. Kaupapa Māori has its own ethical guidelines as outlined in Te Ara Tika: Guidelines for Māori Research (Hudson et al., 2010) which ensures the research is conducted in a culturally safe and respectful way for participants. According to Hudson, the ethical considerations for Kaupapa Māori are whakapapa, manaakitanga, tika and mana and the research was designed in way to honour these.

Building and maintaining relationships is an important part of te ao Māori and thus was inherently important for this research as well. In terms of ethics, this was upheld by having the interview hui face-to-face, where possible, sharing the findings with participants, and seeking ongoing consent. Manaakitanga in this context refers to ensuring that cultural and social responsibility and respect is upheld and it determined all interactions with the participants. Similarly, it was also important to maintain the dignity and respect of those involved and address the imbalance in power throughout the process of the researcher-participant relationship. This was addressed by providing a koha, a kai voucher and handmade gift, to thank the participants for their time and sharing their whakaaro. Finally, tika, which means 'the correct way', was also important in establishing the research design and ensuring

validity of results. This was done by continually reviewing that the chosen methods aligned with Kaupapa Māori theory and placed Māori needs at the centre of the study.

Conclusion

This chapter looked at the importance of Māori research being conducted using Indigenous methodologies that have originated from within these communities to uphold the mana of the people as well as the mātauranga produced from it. This study positions itself using the Māori-centred research approach which acknowledges the influence and limitations of being formed from within a Western institution. The next chapter presents the findings for the research question: *How can augmented reality support Māori tourism development in Tāmaki Makaurau?* and provides context for the data collection.

CHAPTER FOUR: Findings

The empirical findings from the eleven interview transcripts, observations and field notes were analysed using thematic analysis (Braun & Clarke, 2006). The results of the data analysis are organised by the three research questions stated below and are arranged by themes within each section.

1. How do cultural AR tourism experiences align with te ao Māori?
2. How does Māori tourism delivered through AR support sustainable development?
3. What opportunities are available for AR Māori cultural tourism in Tāmaki Makaurau?

The first research question aimed to investigate participant perspectives on Māori values and its relationship to sustainable development and commerce. The responses are under the themes of Māori values and commerce, using commercialisation for sustainability, role of kaitiaki and storytelling, and finally tikanga.

The purpose of second research question was to explore how AR could support sustainable Māori tourism development. It does this by examining how technology can be a connector to te ao Māori.

Finally, it addresses the current situation in Tāmaki Makaurau by drawing on those with experience in Māori tourism apps and provides a picture of industry and iwi responses to this technology.

AR Maori Platforms

The following section briefly describes the AR platforms in further detail before presenting the findings according to the corresponding research question.

Ngāti Whātua Ōrākei

Ngāti Whātua Ōrākei launched an AR guided tour in 2018 on the app 'Auckland Virtual Tours' for their popular tourist spot at Takaparawhau, Bastion Point. In a press release, they state the aim of the app is to ensure their iwi stories are widely shared using a method which has a low-impact on the physical environment. Furthermore, they describe the importance of continuing oral traditions and ensuring the knowledge survives by making it accessible to

more audiences. In their own words, they have “...add[ed] the history and genealogy to the Bastion Pt experience so it allows visitors to understand the place in depth” (Williams, 2018). For the creation of their app they needed to outsource to an AR development partner as they lacked the technological skills in-house to create the platform. However, Ngāti Whātua Ōrākei contributed all of the content which features real people, waiata and stories from their own iwi.

In particular, Ngāti Whātua Ōrākei wanted to take advantage of the bus loads of tourists coming up to Bastion Point and looking around on their phones. Their challenge was to get those tourists engaging with the space and the story behind the area while “being taped to a resource”, and they saw AR as an effective way to communicate that. The app was still running when the interviews were conducted, however it has since been deactivated and is no longer in use. The commercialisation of the app was identified by Participant Four in the interview as one of the main issues impacting on the continuation of the app.

The experience was called ‘Ahi Kā’ and it was centred around the main part of the grounds where tourists can arrive by car and walk around the Michael Joseph Savage Memorial. The AR virtual tour begins by prompting the user to move towards a marker, indicated by a glowing arrow on their phone screen. When they arrive at the marker, it triggers the corresponding AR content. The images below show different screenshots the researcher took while using the app and demonstrates different levels of AR overlay.

Figure 2

Screenshot of Ahi Kā tour: Virtual Māori boy explains the meaning behind the Ngāti Whātua Ōrākei name for Rangitoto.



Note: Cropped for formatting. From “Auckland Virtual Tours [Mobile app],” by Ngāti Whātua Ōrākei and M Theory Studios. Reprinted with permission.

Figure 3

Screenshot of Ahi Kā tour: AR overlay depicting explosion of Rangitoto volcano.



Note: Cropped for formatting. From “Auckland Virtual Tours [Mobile app],” by Ngāti Whātua Ōrākei and M Theory Studios. Reprinted with permission.

Figure 4

Screenshot of Ahi Kā tour: AR image superimposing Māori to show traditional practices.



Note: Cropped for formatting. From “Auckland Virtual Tours [Mobile app],” by Ngāti Whātua Ōrākei and M Theory Studios. Reprinted with permission.

Arataki

The second Māori tourism app that participated in this research is also a self-guided tour that uses proximity markers which releases a Māori story when activated by the user’s location. The app works similarly to that of Ngāti Whātua’s, however instead of superimposed images, Arataki uses only audio which allows the user to immerse themselves into the environment the story speaks to. Launched in 2017, this platform began as an idea for a storytelling app which specifically targeted the large cruise ship passenger market in their region (Coleman, 2019). Arataki state the response from iwi has been positive and they work with several other iwi organisation as to digitally deliver their stories. These include Ngāi Tahu Tourism, Waikato-Tainui College for Research & Development (Hopuhopu, Waikato), and Ngāti Ranginui Iwi Trust (Tauranga) as well as a number of others they are in discussions with (Coleman, 2019). While this operator is based outside of Tāmaki Makaurau, they were included because of their expertise in the field and being Māori themselves, they had unique insights to offer being Indigenous developers of their own storytelling app.

ARA Journeys

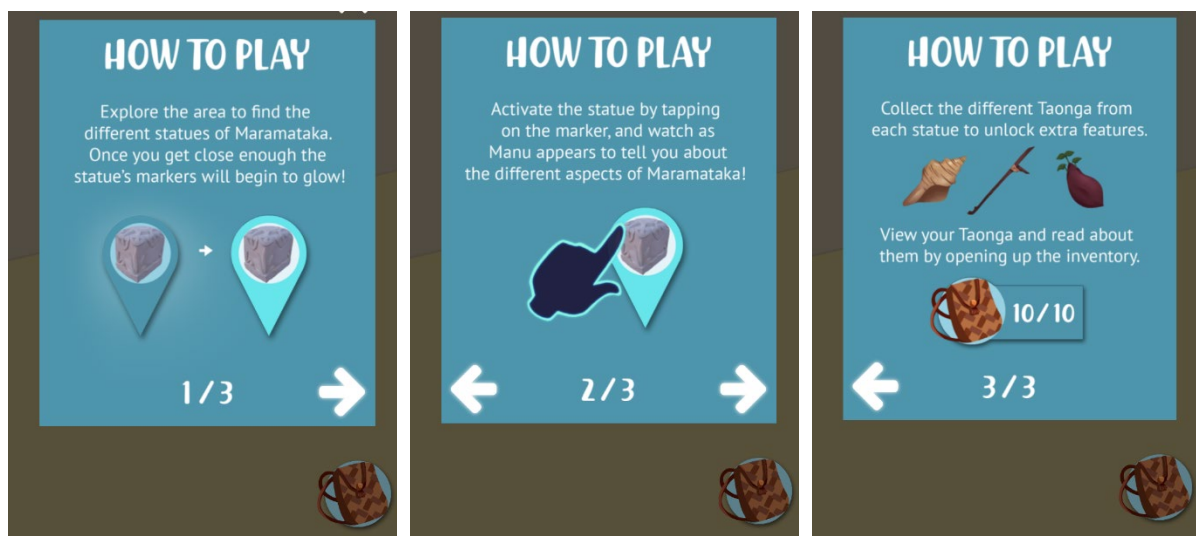
The third Māori AR platform which participated in this study has yet to venture into tourism, however cultural storytelling is a prominent part of their app and they have expressed interest in how their experience may translate into tourism eventually.

The idea for ARA Journeys originated from the owners thinking of ways they could connect people to the culturally significant spaces in an urban environment as well as using digital technology to promote cultural stories. ARA Journeys began with a council founded project when they were approached by Panuku Development who were looking for a way to engage people with the natural environment that were participating in a South Auckland community fun run. This resulted in Journeys of Manu, a GPS-enabled AR app that superimposes an animated, bilingual Māori boy named Manu into real environments using a mobile device (Panuku Development, 2021). The fun run is located around a stream and the council wanted

to use Manu to highlight cultural stories and conservation awareness to the children in a way that was also engaging. After their successful first run with Manu, they worked with council once more to use the maramataka (Māori moon cycle) story to bring a series of related sculptures “to life” in South Auckland (Stuff, 2017). This iteration of Journeys of Manu is depicted in the figures below.

Figure 5

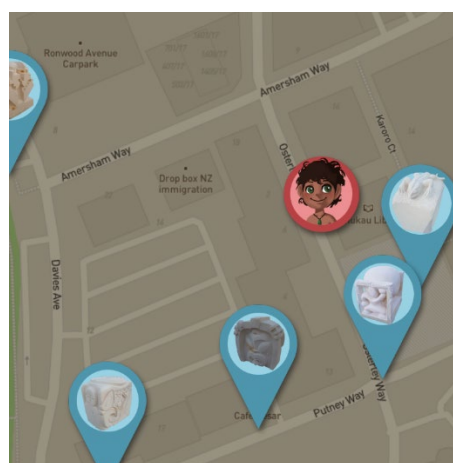
Screenshot of Journeys of Manu: How to play



Note: Cropped for formatting. From “Journeys of Manu [Mobile app],” by ARA Journeys, 2019. (https://play.google.com/store/apps/details?id=com.ara.journeysofmanu&hl=en_SG&gl=US). Reprinted with permission.

Figure 6

Screenshot of Journeys of Manu: Map showing AR content markers.



Note: Cropped for formatting. From “Journeys of Manu [Mobile app],” by ARA Journeys, 2019. (https://play.google.com/store/apps/details?id=com.ara.journeysofmanu&hl=en_SG&gl=US). Reprinted with permission.

Figure 7

Screenshot of Journeys of Manu: Inventory showing taonga (treasures) collected.



Note: Cropped for formatting. From “Journeys of Manu [Mobile app],” by ARA Journeys, 2019. (https://play.google.com/store/apps/details?id=com.ara.journeysofmanu&hl=en_SG&gl=US). Reprinted with permission.

With plans to go worldwide and already a handful of countries from Asia and the Pacific interested, ARA Journeys is also aiming to transition into tourism by embedding Manu throughout great walks across New Zealand. On top of being utilised in various Auckland council professional events, Manu has since appeared in several countries including the Cook Islands during their language week in 2019, as well as trialling in Hong Kong schools mid-2019.

The chapter now turns to the representation of the empirical findings relevant to the research questions.

Research Question One:

How do cultural AR tourism experiences align with te ao Māori?

Values

Māori-centred tourism as defined by McIntosh et al. (2004) is explained in depth in the research setting of chapter one and was used as a reference for participants. The conceptual understanding of Maori-centred tourism was emphasised by all of the Māori participants as something which directly influenced their tourism business operations.

Seven of the Māori participants acknowledged the role of Māori commerce in enhancing the wellbeing of the individual as well as the wider whānau, hāpu and iwi. Incorporating cultural values into their business was echoed throughout the interviews:

It's all about our core values of manaakitanga and kaitiakitanga, so caring and sharing and guardianship, those values we hold true on the marae but also in the business world as well. (Participant Four)

For us it's pretty easy, Māori-centred tourism, because we're iwi based so our values are very aligned to these values as an iwi and as an organisation so we are intrinsically guided by these regardless if it's on the marae, at our workplace, or out there looking after visitors to New Zealand, so I think this is an easy one for iwi owned organisations. (Participant Five)

Our cultural values are everything. Our Māori-ness is everything. Te ao Māori is everything to us so we prioritise our cultural values before anything else....for us, being Māori is everything, being Māori is everything so the fact that we're an 100% Māori owned tech company is incredibly important and I'm very proud of that. (Participant Eleven)

We're really interested in developing a Māori business that is Māori, that in every way you engage with us that it looks, feels, [and] is Māori. (Participant Eight)

The majority of these agreed their cultural values make an impact by either directly or indirectly informing business practices, which they distinguished from a Pākehā worldview. However, offering a different view, one of the Pākehā participants claimed these values are “fundamentals, they're not just Māori...if you go to another country they manaaki just the same”. Despite this she still considers her operation as Māori because she operates on a Māori owned beach, she said it may not be obvious but the Māori values are still “an integral part of [their] operation”.

Māori values & commerce

Participant Nine talked about his experience of working many years in a predominantly Pākeha environment and then having to adopt a Māori worldview later in life when given a role in iwi-run tourism operations. In reflection, he stated that he prefers “the Māori way” because the underpinning values are helping him to navigate business as they are “a more natural, more holistic way of viewing the world particularly in a commercial space”. Participant Three also described her experience holistically in various Māori development roles, stating that Māori development “involves everything”.

[Māori] economic development is tourism, it's wellbeing, it's health, it's justice, it's education. Without economic development, you won't get one of the other outcomes. (Participant Three)

This concept of Māori commerce being leveraged for benefits which feed directly back into their communities was expressed by several participants and their views can be aptly summarised by the following quotes:

We didn't get into this gig to make money, we got into this gig because there was some impact that we wanted to make on te ao Māori for our people, for the betterment and advancement of our people....yes we do need to make money to pay some bills and that's important but that's not the essence of why we are in business, it's more about making some intergenerational impact. (Participant Eleven)

Māori business is going to be the future exemplar of an approach that takes care of the planet, by not focusing on planet but focusing on place, through having purpose and generating outcomes using human capital or people. (Participant Five)

Participant Five describes Māori business as “mana economics” which he explained is the combination of emotional, environmental, and social wellbeing exchanged for economic power. In his own words, “Māori business is, how do I empower my family?” He stated his top priority is for Māori to reconnect with and value their identity in order to move from a state of “survivalism” to one of “thrivalism”. Meaning Māori have been recovering from the detrimental damage caused by colonisation, and Māori tourism is providing opportunities for them to succeed and provide for themselves as determined by them.

The Māori participants acknowledged experiencing a difference between businesses driven by Western influences compared to Māori operations that are heavily underpinned by cultural values. There was discussion of how Western commercialism is often at odds with the core Māori principle of being caretakers for the environment and preserving resources for future generations.

Western capitalism itself has outsourced it's beliefs systems so that business can get on with just doing business - there is a disconnection from the why, what and how? Whereas in te ao Māori, those things are united within an individual. (Participant Five)

One of my aspirations in terms of writing our business plan is to ensure that all of our cultural values are indoctrinated or integrated into that business plan and at the forefront of everything that we do....I do feel that if we [do this], we'll safely able to navigate through the commercial and Western business world whilst always maintaining that commitment that we have to ourselves as Māori and to our cultural values as well. (Participant Eleven)

Using commercialisation for sustainability outcomes

Participant Two stated the commercialisation of culture in tourism is a necessary part of the cycle. He explained:

There's a sustainability circle that tourism allows to happen because of the commercialisation of culture as well and the same goes for environmental sustainability. The more people learn and engage to understand it the more happy they are to contribute and pay to learn about it. (Participant Two)

Another participant referred to preserving the environment as necessary for Maori tourism product. For Māori and Māori tourism products, our environment is our product. Without a healthy environment, you're not going to have a healthy product...so what are we providing? How does this benefit our people? (Participant Three)

Participant Eight highlighted AR and developing new methods in sharing Maori stories particularly around climate change.

What I think will be cool, and people might not agree with this, but even having new stories. How do we tell a Māori story of our new issues of climate change?...How do we make Māori games that aren't based in pre-colonisation but still follow our way of creating games?...I think it's a colonised way to think that we stopped making games, knowledge, and stories all of a sudden when the white man came. We still make stories and not just our old stories, its: how do we make stories about our people today? (Participant Eight)

Participant Four illustrated the cultural dilemma commonly faced by Māori operators when deciding what information to share and how it is delivered. He asked rhetorically, “How much would you pay for a 300 year old story, how do you put a price on that?” From his perspective, the key to balancing the two is to have a level of flexibility between upholding values and generating profit, as it is a paid experience. However, he states that they would never compromise their values in order to gain a profit. This aligned to Participant two’s view:

What I think you’re commercialising is not your culture but your IP, and peoples’ interest in that knowledge or the way of thinking. So people are prepared to pay to learn to be educated and to feel differently about things, or to be moved so I think where Māori tourism and where indigenous tourism adds almost immeasurable commercial value. (Participant Two)

Tino rangatiratanga – Self-determination

Regarding the Ngā Iwi entity and regional Māori tourism strategy, when asked why it is beneficial for Māori to have a separate strategy plan, Participant Four justified it as a way for Māori to see their own aspirations through to achievement. In concluding his argument, he summarised by asking, “why wouldn’t you have experts to run and create an expert experience?”. Others expressed frustrations over feeling like an “after-thought” and being pigeon-holed into already developed strategies instead of being key partners from the beginning. In response to this frustration, Participant Three explained that “a lot of little Māori business operators [are] going for it alone” and using their personal value systems to self-determine rather than fit into an organisation that does not share these same values. She stated:

...no matter what [they] say in regards to their strategic plan and including Māori in their equity goals, they’re trying to meet equity goals, but when you run your own business we don’t have equity goals, we don’t need to meet a goal, that’s not realistic for us because we are Māori, we are the ones that are being misrepresented in policy. (Participant Three)

Likewise, Participant Five asserted that Māori cannot truly be empowered when operating under terms that have not been designed by them and will not be able to do so until they become the decision-makers.

Kaitiakitanga & storytelling

Storytelling was recognised by each of those interviewed as a core component of Māori tourism as it is founded on oral traditions that date back hundreds of years. Storytelling remains a highly regarded practice in te ao Māori which is believed to facilitate powerful, transformative experiences. Participant Eight explains from a research point of view:

We told stories and we encoded science, belief, and everything within those stories....You know when you don't have a written language what better way to do it than in way that's memorable?....you could argue that our form of dissemination of science is far more effective than the Pākehā way, and that's coming from an academic side. (Participant Eight)

Participant Five defines Māori tourism as “the engagement with those beautiful stories” as well as “the immediate lane before us that offers...very impactful opportunit[ies]” for Māori and for manuhiri (guests). He emphasized this point by relating storytelling to one’s core identity as Māori:

If Māori means to be a bright vibration, then it's appropriate that their output is mauri [life force, vital essence] - the descendant of that brightness. That can be done through the power of a story, of reality. (Participant Five)

Similarly, Participant Two commented:

That's why storytelling is so powerful because everyone loves a story and everyone can remember a story. (Participant Two)

These quotes highlight the importance storytelling has in te ao Māori as well as how it intricately connects with one’s identity as tangata whenua.

In addition to being an important part of Māori identity, participants also connected storytelling with their role as kaitiaki. Participant Eight explained that sharing stories reinforces the relationship Māori have with their environment and their duty of care to it:

By personifying nature [through stories], we had a relationship to it. We had to care for it because it cared for us....Our stories and our attachments to whenua cannot be disconnected from conservation issues and hopefully what we're doing by getting people outdoors, as well as them gaining an appreciation for these natural spaces, is realising that...we do need to take care of the environment. (Participant Eight)

Participant Eleven also referenced the responsibility they carry as ancestors:

We think about our role as being responsible ancestors and that's basically what we're about but it can be very tricky and very challenging when you're having to balance...commercialisation with cultural values. It's very tricky but it is not impossible, it is doable. (Participant Eleven)

This duty of care was expressed in relation to their identity as tangata whenua, which gives them authority and a responsibility to look after the wellbeing of their environment.

Tikanga

When discussing Māori tourism and AR, a number of issues were identified relating to how tikanga can be upheld through this new form of disseminating knowledge. In particular, an area of concern for participants was how Māori cultural knowledge is to be delivered and protected when using technology. Participant Eleven described similar reactions from iwi:

Generally the reception has been positive but...there is a level of reluctance...[and] scepticism because these are not stories, these are our taonga, these are treasured stories and content that are an essential part of the identity of these iwi. I think that does present a challenge because if you're reluctant to share then already there's a barrier. (Participant Eleven)

He explained how they address these challenges:

We're not just a tech company and in fact it's not even about the technology...we are responsible and committed caretakers. Not only that but we're a Māori entity and a family owned business and...those things are what we need to build into the relationship or rapport we're creating with all of these iwi that will help us to get through those initial hurdles anyway. (Participant Eleven)

The owner of another Māori app also emphasized the importance of establishing relationships with iwi first before attempting to share or represent their stories.

...even though I whakapapa here anyway, we didn't want to tell mana whenua stories when we hadn't worked with them. That's what we're doing now, working more closely with mana whenua making sure that the stories represent the place. (Participant Eight)

He continued by stating Māori and non-Māori need to ensure they are not appropriating the stories:

Others take our stories and use it not for Māori benefit but for their own. That includes us and companies like ourselves, even though we're entirely Māori owned and operated at the moment, we can't just work with whānau and do what's been done in

the past and misappropriate their stories....the worse thing would be if we build this and they're like 'that doesn't really represent how we tell our story'. (Participant Eight)

The respect and care taken by these Māori app developers demonstrates how highly they regard stories as taonga as well as their role of kaitiaki when using mātauranga belonging to iwi.

An issue for some participants was the fact that presenting Māori knowledge through technology can mean the removal of cultural protocols which serve to protect mātauranga. Without the opportunity of meeting and knowing who is receiving the information on the other side, according to a few participants, it opens the cultural knowledge up for interpretation without the 'safe-guard' of having someone versed in that culture there to guide and explain.

For example, when we started as we did today and in our guided tours we start with a karakia and we start with mihimihi. The app skips that or it may have that but the level of the connection is not quite there...I think that deeper connection is going to come from that interpersonal connectivity....it's about sharing the breath of life. (Participant Four)

Participant Five was also worried about what is lost when transferring aspects of cultural into a technology:

The worry so far is what are we devolving, the rites and rituals of our biotechnology, what are we outsourcing to this [holds phone]? (Participant Five)

Another interviewee, a New Zealand historian, expressed similar sentiments and elaborated:

...if you don't have the cultural context, not only are you not presenting all the information or it's relevant importance but you're actually destroying that context, it's like saying we're not going to need that. So it's more than information, it's setting and understanding and nuance. (Participant Ten)

In his opinion, the underlying message can be lost in the process of refining, and compromising, Māori mātauranga to be consumed in a different way than intended.

Research Question Two

How does Māori tourism delivered through AR support sustainable tourism development?

Using AR to tell Māori stories

While there were discrepancies identified between Māori values and commercialisation, it was suggested that Māori are using business to push for outcomes based on their cultural priorities. In particular, stories were described as a tool which can be used to address modern issues of sustainability.

Our stories...and the way our worldview and our way of understanding the world and the knowledge we created in that space, it enabled us to survive and thrive in one of the most difficult of environments. It might answer a lot of the questions today about climate change. (Participant Eight)

In fact, development in AR technology has seen Māori take advantage of digital storytelling to highlight the current conservation issues their communities are facing and communicate this information to audiences in a novel way.

Blending storytelling with culture with conservation, that's a huge unique thing. That we can use technology to tell those stories and increase people's engagement with those features, culture and the environment....Hopefully if we can build a whole network of these, then people can start engaging wherever they are and learning the cultural history of a place rather than 'oh it's just a nice beach'. (Participant Eleven)

AR provides an opportunity for us to actually connect culture within environment again. Our stories are inseparably connected with the environment....here's our opportunity to actually tell some stories because [the Council]...wanted to highlight the actual conservation issues and the cultural stories about [the stream] because it's a really significant water way for Māori. (Participant Eight)

Participant Eight explained that they do not want to replace actual storytellers with this app but instead by making this content only accessible at its environmental context, it acts as a taster for the real deal...

What's going to keep it relevant in terms of getting people to identify, feel the story, want to go and learn more, that's all in your content and the way you present it. I could give the same experience using a totally different piece of technology and probably still get the same results. (Participant Eight)

Furthermore, he hopes their experience facilitates a sense of place and connection to the whenua for non-Māori that engage with it. Those that worked on or currently have a Māori tourism app expressed caution around only sharing the 'top-layer' story as a way of ensuring the protection of deeper tribal knowledge.

We're not talking about the deep knowledge sense or deep layers of knowledge relating to our pūrākau, we're not talking about whakapapa...we're just talking about that top layer of story or information that sits right, right at the very top layer as terms of why is [that mountain] named Mauao? Why is a place named Tauranga Moana? (Participant Eleven)

One thing was agreed among the participants, it should not be the only way forward when delivering Māori tourism.

...in terms of what's available in....it makes more sense to use technology I suppose to deliver cultural tourism activities but certainly it shouldn't be the only way that we're delivering and creating Māori tourism operations up in Auckland. There should definitely be some level of that physical, traditional if you like tourism experience. (Participant Eleven)

Participant Six asserted that in order for AR to add true value, it must contribute by “the creation of experiences that are only possible through the digital”.

Autonomy

One aspect which seemed to resonate with the Māori operators is that this technology allows the story to come from and be controlled by the storytellers themselves. Five of the seven Māori operators were firm in the stance that whichever direction technology was heading towards, Māori need to be the ones leading it.

We're storytellers...I think if we have this tool for storytelling...it's only right that we're leading the way. (Participant Eight)

This was especially important for the iwi tourism operations of Participant Four and Five. When they partnered with AR developers to create their own app, they retained autonomy over the content which ensured the protection of their stories. Participant Four elaborated:

The support we got was really, really positive. Of course, in our own app it was only our own stories so we were in control of those and it was our own people also, the voices, the actors, the narration was all ours as well and that's one way to keep it safe and to keep your taonga safe... (Participant Four)

Māori have seldom been in control of their narrative in history and so the ability to share their authentic story was viewed as a selling point for iwi. In Participant Eleven own words, he describes their app to iwi as:

...a digital platform that enables you to share your authentic voice and authentic story at place. (Participant Eleven)

Meaning Māori are able to leverage it for outcomes that benefit them and their community.

Other Māori app developers also emphasised the importance of autonomy when sharing iwi stories. Participant Seven said:

You've got to work out whose story is the most accurate for what you want and then get that signed off but I think whatever you do I think keep that close with the iwi [and] with the kaumatua. You don't want to get it wrong because that defeats the purpose of the platform....That's all that we're trying to do, is fill Aotearoa with these stories. Stories that ultimately mana whenua will control. (Participant Seven)

Participant Eight similarly commented:

I don't have any issue with people around the world learning our stories...but it has to be done right, it has to be done by those who are actually kaitiaki of that knowledge rather than just some company like us saying 'oh hey we're going to share this story' and it's not our story to share. (Participant Eight)

These results suggest those involved in developing cultural digital platforms used for sharing Māori content also uphold tino rangatiratanga as a core business value.

Participant Eight further connected this to one's role as kaitiaki, which includes taking care with the taonga of others.

Ultimately they should be able to veto anything that goes on because it's their story and even though we even though we own the platform, to misrepresent one of their stories, their whakapapa, is just not right so there needs to be care taken there. (Participant Eight)

He continued by emphasising how whanaungatanga impacts business transactions with iwi because they come from a place of wanting to contribute to the advancement of all iwi, not just their own affiliations.

Engaging with iwi in any business transaction...[it's not a] 'we've got your money and stories and everything we need from you, thanks for doing business'. It doesn't work that way. We've built a relationship now, something you've got to maintain for the rest of your life pretty much. (Participant Eight)

Participant Seven and Eight both explained this as a point of difference when approaching iwi as the initial response is often mixed. However, once the concept has been properly explained and understood, they said there has been enthusiasm and excitement from Māori. Participant Eight recounted that “most, I’d say everyone actually we’ve talked to are keen, they’re really keen to use AR to tell their stories, all of them.” He continued,

[There’s been]....plenty of interest, there’s so much and it shows to me if you’re talking about AR in tourism and storytelling or whatever that we’ve proved – I mean not just us but the concept of using AR is proven in a storytelling tourism cultural space. (Participant Eight)

Technology: Connecting to te ao Māori

One thing that was repeated by all five of the operators with an AR app is that while these ventures have utilised technology as a core part of the product or experience, they were not created with the focus being on the technology itself. Rather, it has always been seen by them as merely being a tool which can be used for sparking intrigue, educating, and connecting to culture and people. Participant Eight asserted several times that their ultimate goal for ARA Journeys is to be a “stepping stone” in helping Māori and non-Māori connect with the culture and valuable knowledge. In his own words, their platform is:

...a tool to learn my stories again and...be lead to the actual storytellers, I think there’s a lot of value there. (Participant Eight)

He explained how they view it as a process of steps as the initial exposure to a story and place through AR aims to educate and then encourage further engagement from the user.

The final step would be actually to talk to the whānau there and that’s the real authentic storytelling and experience that I think tourists are looking for that even now. (Participant Eight)

The creator behind Arataki argued that by facilitating the engagement of place while listening to the associated story, it creates opportunity for connection despite the assumption using technology causes people to disconnect.

Some might argue that technology may disconnect, but I actually feel that technology provides the opportunity to connect people with the physical environment and certainly with the natural environment. (Participant Eleven)

He understood the pushback but asserted that ultimately it is better for some form of traditional knowledge to be accessible:

If you don't have a storyteller or knowledge expert there physically with you in that moment in time then you're going to completely miss everything so you're not going to know that there's a story about that mountain. (Participant Eleven)

Providing examples of personal experiences now available on AirBnB, Participant Two agrees that “technology is providing access to human engagement”.

Youth on phones

Participants recognised from either personal experience or observation that growing up in urban Tāmaki Makaurau can be challenging for Māori to establish a cultural connection, especially if their iwi is based elsewhere. One participant agreed there is a need to connect Māori youth to their culture but was uncertain how that was to be achieved. ARA Journeys aims to address this with their ‘Journeys of Manu’ experience:

This is the other reason why we decided to create [Manu] the way we did is because a lot of Māori are growing up urban and they don't have the same opportunities as other family members who do stay down on the marae or who are heavily involved in those activities...so iwi can tell their stories and no matter where you are, you can go and visit and feel connected back to your iwi and back to your whanau. (Participant Seven)

She reflected on her own family experience which motivated the creation of their app:

But my kids have grown up in Auckland and they wouldn't have a clue of any of the stories, the marae stories. I still don't know all of them but all our elders are dying so we really need to start capturing them but it needs to be in a way that kids are going to want to engage. (Participant Seven)

All four of the Māori operators in Auckland with an AR app indicated that targeting youth through this medium was an easy target as they already spend a substantial amount of time on their phones. Two of the Māori AR apps described their motive as being a combination of seeing youth “glued” to their phones, wanting to get them outside and active, but most importantly connect them to their culture.

My kids are on their phone all the time right? So if I can get them on their phones learning about our stories and our tipuna, I'm all for it. (Participant Four)

...they've always got a phone in their hand so how do we use that in a way that can connect them to our culture and to our stories? I thought let's come up with a story telling app that uses AR that gets us outdoors like Pokémon Go and that has a cultural layer to connect us to the culture. (Participant Eight)

Participant Three felt not enough is being done to target Māori youth even though they make up the majority of the Māori population in New Zealand:

In ten years, we're going to have a population of majority of Maori that are young and in their mid-20s, it's astounding that we're not prepared or even trying to develop for that age group. (Participant Three)

In terms of social and cultural wellbeing, Participant Four described the aspirations for their platform was to build something Māori youth could aspire to be a part of and develop themselves, stating,

I think it something for our kids to be creators and not be just consumers of this content. (Participant Four)

Similarly, Participant Seven and Eight identified a lack of skilled Māori in the technology industry which they hoped to address.

It's quite a specialised team, and this is why we want to create the internships through the company so we can have Māori and Pasifika or indigenous kids coming through the company but they're working on their content, so they get to create the cultural stories whether it be for their iwi. (Participant Seven)

Education of Māori history

Due to its large appeal to children, the majority of participants recognised the potential AR platforms have for being fun, educational tools. Participant Four used examples of AR at historically famous sites such as the Pink and White Terraces and Ruapekapeka Pā which proves how technology is already being used to educate tourists as well as the next generation of tamariki in New Zealand. Participant Seven described how they hope presenting the information this way can help preserve Māori mātauranga:

[Google doesn't] create any curiosity or spark any interest to go learn about it, whereas with the AR digital gaming overlay on it....If we give them those opportunities they're going to want to learn more and that does preserve culture. (Participant Seven)

Furthermore, Participant Eight realised that the content in the app will only keep children interested for a short amount of time before they move on.

I don't think AR is what will make these stories stick because we found with even some of our longer stories of 45 seconds kids are already bored...(Participant Eight)

ARA Journeys aims to address this by eventually incorporating artificial intelligence (AI) in the app where the children can converse and ask questions to an AI version of *Manu*. Similar to ARA Journeys, Arataki also target younger demographics using competition and gamification aspects which they see as benefiting both Māori and non-Māori:

What we're doing is important for all kids, for Māori and non-Māori, from an educational perspective so again by providing information and educating we can provide a bit of empathy, but also understanding around the stories that are important to Māori. (Participant Eleven)

Access to Māori knowledge

Participants discussed the need to save Indigenous knowledge that is being lost with the passing of the older generation, viewing this business opportunity as a way to preserve culture.

We're an ageing population and it needs to be housed somewhere...otherwise it'll just go on a shelf....If we give them those opportunities they're going to want to learn more and that does preserve culture..... (Participant Seven)

Participant Five referred to this phenomena, Māori are suffering from a “no-data issue” in reference to loss of traditional knowledge.

When discussing how digital tools can contribute to cultural sustainability and education, Participant Six argued that a valuable aspect is being able to share your culture on a scale unlike before.

For the local iwi...being able to show to others your culture, your values and what's important to you through technology is a huge thing, you can communicate your cultural importance to the masses through a new medium and vice versa. (Participant Six)

In agreement with this, participant Eleven attributes the ‘all hours’ access as an important enabler for people to connect and engage with Māori culture, in this form, whenever they wish to.

We believe that...being able to access these stories pretty much anytime of the day any day of the week is important as well in terms of being able to engage....It's important to have our storytellers present and there with you to share their knowledge and that's a whole other experience and that's not something that we can ever compete with and certainly we don't intend to replace our storytellers but using technology allows us to connect at scale with more people. (Participant Eleven)

This participant acknowledged that while you cannot replace the interpersonal experience when engaging in cultural tourism, technology removes barriers to connecting people on a mass scale. A previous regional tourism development manager mused that having a layer of history augmented on top would provide a new lens with which to view the city landscape. He explained it could add “depth, feeling, and atmosphere to what essentially is any city, any country, in the world.”

Provides safe learning environment

A recurrent theme in discussing its use for education, almost half of the participants talked about how technology can create a culturally safe environment where people can learn potentially delicate topics in their own space and time without fear of stepping on ‘eggshells’. A repeated advantage is that it takes away the barrier of people feeling too shy to ask ‘dumb’ questions, including Māori, and allows them to question things differently at their own pace. A few participants expressed that tourism provides a means for those people to engage with beautiful Māori stories and to feel a part of it as well, especially through storytelling. Their views can be summarised with the following quote:

...it also removes the barrier of whakamaa. Many of our people find it whakamaa to reach out and to ask their people, elders, or marae about these very stories and there's a level of whakamaa around who do I go to access these stories? How will I be receive if I engage? So there's a lot of that, particularly in our urban areas. So I believe that a platform like ours can remove those challenges of whakamaa...once you have engaged digitally, it might give you more confidence to say I actually want to go and learn more. (Participant Eleven)

Participant Eleven states that this digital connection can act as bridge which encourages users to engage on a deeper level by building their confidence to approach whanau, hapu or iwi.

Context-based learning

Also discussed on the topic of education was the importance of physically being present in the spaces where the story relates to and the impact this has on learning and immersive experience of it. The Māori participants all placed emphasis on the importance of place, and spoke about the difference it makes experiencing Māori culture by hearing the stories while being in the places they are situated.

In discussing this, one interviewee described their reason for starting the Māori AR tech company was to “get our people actually engaging in different spaces where they usually wouldn’t” while at the same time connecting them to culturally significant spaces “even though it’s an urban environment”. He goes on to emphasise this point later when he claims that Māori culture has been separated from the environment and this technology provides the opportunity to situated it where it was intended to be experienced.

One concern that was brought up by the co-owners of ARA Journeys is the challenge of being able to keep these spaces engaging and encouraging repeat visits, not just one off experiences. Participant Eight claimed he wants to do this by forming a significant connection between the app users and the site so it becomes what draws them back to the area.

Talking about culture regeneration, Participant Eight believed it to be “an innovative way to learn te reo and strengthen te reo” by placing the lesson back into the environment. He gave an example of how language acquisition naturally occurs in the environment through contextual learning and has a bigger impact than hearing about what a kawakawa leaf looks like versus feeling the leaves in your hands. He reiterated his point by suggesting it goes even further to develop understanding of the rongoa story behind the kawakawa tree compared to not having physically engaged with it when hearing about it in a classroom. In a similar fashion, Participant Eleven’s app is also designed to be experienced physically at the place and the content cannot be unlocked without being in proximity to the AR marker. The reason behind this was to prevent people just accessing the content from anywhere and instead,

It forces people to go out to the mountain, to the river, to see, touch, breathe in and hear that place to receive the benefit of that story. From an Indigenous perspective, there’s nothing more powerful than going to a place, standing there, looking at it, feeling it, breathing it and listening to the environment that’s surrounding you at that very moment in time and hearing the story that’s relevant to that mahi, there’s nothing more powerful than that. (Participant Eleven)

He continues by emphasising the importance of making the visual connections with the visual references which in his own words “adds to the richness of the experience” creating something powerfully immersive by being context-based.

Some participants felt that having such easy access to the information would water down ‘authentic’ cultural tourism by offering an alternative to face to face experiences. Participant Two stated expressed concern that having access to a guide in your pocket would encourage people to experience it entirely on their phone instead of through a real person. This participant was not keen for the digitisation of tourism experiences, especially cultural, as he believes the value comes from interacting with someone from that culture. He described it as being more of a tool for connecting people:

I’m not sure [AR] is adding value....I think...tourism is moving rapidly to utilising technology to connect people to people, not the other way around....yes absolutely people would enjoy that, yes it’s an interesting way to access that knowledge but my recommendation is that we’ve got to maintain that knowledge and ability to deliver it within humans...there’s definitely a place for it and to add value to stories but I don’t ever want to see it replace people looking after the people. (Participant Two)

Others agreed with this interviewee’s views that incorporating technology deems the experience as less authentic.

It’s not deeper learning, it’s added value, and a value added awareness not deeper awareness because you can’t get deeper than me. (Participant Three)

Participant ten claims that AR could become a replacement to traditional knowledge transmission.

You’re saying we don’t need to rely on the traditional ways because this is a substitute for it, so the bigger the substitute becomes, the more compressed the traditional way becomes because who’s going to use it? (Participant Ten)

Despite their app teaching real knowledge of the Māori maramataka (moon cycle), Participant Eight referred to their own experience as inauthentic. He stated that instead of trying to replace a ‘real experience’, the purpose of their app is to entice the audience to engage and find out more.

People want authentic experiences and having Manu pop up and tell you a story isn’t really an authentic experience and it doesn’t replace real people...Hopefully we can connect people to those story tellers and this is just a taste...(Participant Eight).

He explained they keep their operations in check by constantly asking themselves:

...‘Is this getting them to connect with their environment and with their cultural stories?’ (Participant Eight).

Research Question Three

What opportunities are available for AR Māori cultural tourism in Tāmaki Makaurau?

Māori Tourism in Tāmaki Makaurau

A topic of concern for the participants, and in particular the Māori operators, was the issue of authenticity regarding Māori tourism. Participant Two discussed how the industry has begun to realise that the product we deliver does not necessarily look or feel right. He attributed this feeling to the lack of Māori in Auckland who are taking up tourism as a career, meaning our hosting, guiding and entertaining tourism roles are being filled by non-Māori.

I’m really stressed on that authenticity piece especially Māori tourism in Tāmaki Makaurau, that the right people are delivering it. That the right messages are being told, that the right stories are being told by the right people. (Participant Four)

Participant Four stated this is essential so as to not damage the overall Māori experience in Auckland. He continued by saying that within their own iwi operations they are mindful of the stories they present and want other operators to be telling the right stories with permission from the story kaitiaki. This was reiterated by another operator in Tāmaki who said:

No-one wants their stories being retold by other people, we guard this stuff quite lovingly because only you can talk about [your] mum and dad. (Participant Nine)

Participant Two illustrated the current need for Māori in tourism when quoting a request he received from another tourism manager looking to recruit:

“We would take ten Māori youth tomorrow as long as they turn up and they can work, we’ll train them...but we want them to tell their stories and to welcome people authentically” (Participant Two).

It was pointed out by Participant Three that while these concerns are common, quantifying the authenticity of Māori stories is complicated. She stated that it is dependent on how the individual engages with and interprets their Māoritanga.

The product is me telling about how I engage as a tourism operator and as a Māori woman with the land...whilst any other tourism operator can do the same, the key point of difference is that I would be coming from my values system....[which] are

different from other Māori value systems. It then comes back to...my pepeha and my identity so that's the tourism product and that's the difference. (Participant Three)

When asked about the lack of Māori tourism presence in Tāmaki Makaurau, there were a range of responses as to what the causes are. Participant Two who previously worked at the Auckland RTO, recognised that having 19 different mana whenua in the same space has resulted in the lack of a strong localised identity. He acknowledged that:

Our Māori culture is not represented as well as it should be right now....I think Auckland has an opportunity to present the stories of Tāmaki Makaurau in a more contemporary way than maybe what other places have done historically. (Participant Two)

Māori app creator, Participant Eleven, also recognised the opportunity Tāmaki Makaurau presents:

You've got 19 mana whenua, 19 tribal interests, it's the most complex iwi domain and space in New Zealand. So it's all there, someone just needs to start...I suppose that's kind of what we've created in terms of the platform. (Participant Eleven)

Participant Ten, a New Zealand historian, emphasised the difficulty in covering different iwi narratives because of the rich variance of history there is within the region. Others expressed similar thoughts:

The difficulty is that it's contested between iwi as well and even between whānau within iwi... (Participant Eight)

...Iwi can't even decide on their own narratives in some sense... (Participant Three)

...If you think about multiple tribal interests within a particular region...all sides of the story should be represented about that mountain from multiple perspectives side by side and the reason why I think that should be, because there is not one true version of the story, it really depends on your affiliation. (Participant Eleven)

Differences between tribal history within the same area is something they caution necessitates a careful approach when presenting the story of a place.

Participant Eleven, who is not located in Auckland, showed their interest in launching their platform there because of the potential it has due to its level of infrastructure. When asked how this technology can support a new mode of delivery for Māori tourism content, he stated:

I guess Auckland's a really great example of where that environment or scenario might exist because there's not a lot...of traditional cultural tourism activities around....certainly not on a Rotorua level of cultural tourism activity available. So technology could be another way to create more cultural tourism opportunities. (Participant Eleven)

He listed many aspects to Auckland which is advantageous when developing an AR platform.

Particularly in Auckland being as it is the gateway to New Zealand and being as it is theoretically the best infrastructure in New Zealand in terms of cellular coverage, in terms of 4G soon to be 5G, in terms of what's available in the city because it is the largest city in New Zealand, all those types of things are really relevant. Wi-fi access points, public transport...so it makes more sense to use technology I suppose to deliver cultural tourism activities... (Participant Eleven)

In this quote the participant outlines several advantages for launching Māori tourism apps in Tāmaki Makaurau. Another interviewee described the potential in relation to Auckland's rich history and varied landscape:

...the Māori story is a beautiful story and especially in Tāmaki, it's a rich story and it's one to be shared....look at us, we are surrounded by volcanoes and water. Why not bring those things to life? How exciting, absolutely exciting. We have waka popping up on the Waitemata, we have warriors standing on Maungakiekie, we have volcanoes erupting, we have our creation stories so I think Auckland has the perfect landscape, North, West, East, and South to tell these stories. (Participant Four)

Several participants likened AR technology to a type of magic, being able to bring back to life what once was by uniting two worlds together; the past with the present, the unseen with the seen.

I think there's so much power to see an ancestor walking along the foreshore or being able to see a taniwha or what we would perceive to be one of our taniwha or deities present in the real world. It's kind of like a little bit fantasy, a little bit bringing the past into the present which is really cool so I really think that AR will play a big part in the future of Indigenous storytelling and I know this because we partner with many Māori technology businesses that are rolling in that specific space. (Participant Eleven)

Interest from iwi

When asked whether iwi are mainly interested in sharing these stories to their own people or for the wider community and tourism opportunities, the co-founders of ARA Journeys shared:

Those that I've spoken to can also see the benefit for tourism as well. Not only tourism to attract people to these spaces but tourism as in teaching tourists our way and

teaching tourists the importance of our knowledge and acknowledging mana whenua, acknowledging the people of this place. (Participant Eight)

After [the first] launch we had a lot of interest come through from council and other iwi who were looking to do the same kind of thing. They were wanting to promote the environment and tell their stories in relation to their rohe. (Participant Seven)

For Arataki, the owner explained how they had not planned or created the app for tourism purposes but instead ‘fell into’ the sector after realising the potential demand.

We had no idea...We literally just wanted to make a storytelling app but we found pretty quickly over those first 12 months...and of course our relationship with...our RTO...made us realise we had created something that was suited to the tourism sector. We didn't initially target the tourism industry but we quickly realised we created an app that could be suitable for foreign tourists. (Participant Eleven)

Similarly, Participant Seven said they initially wanted to focus on New Zealand kids, especially those missing out on their whakapapa and tribal stories. However, the app has also gained attention globally:

Later down the track we started getting the interest from other Indigenous cultures which made us go “okay, this is a bit bigger than what we thought”. (Participant Seven)

Audience

The high level of interest in Māori tourism and storytelling apps illustrated by ARA Journeys suggests the potential demand and widespread appeal of this technology. Participant Eight explained how iwi are imagining it as a tool for their own iwi and the tourists coming through their region. He stated:

I think because he's designed to be in the environment, along the beaches, along the trails, for the most part they're thinking wider so not only their iwi but the tourists coming through. So their stories, their area but you know, how do we educate people outside New Zealand coming in? (Participant Eight)

Participant Seven noted that there is often more engagement from non-Māori than Māori at these events which she found “definitely surprising.” However, she explained further that:

Māori that know about Manu, and their kids in particular, they're right into it but with other cultures it's been the non-Māori adults saying ‘this is really cool...’ (Participant Seven)

Arataki noted more uptake from domestic visitors than international tourists, and had especially positive feedback from locals who were excited to be learning these stories about the places they live which they did not realise existed.

We found that our content is suited to many people and many communities, and not just tourists but people moving within New Zealand that are going region to region or city to city because they're wanting to be able to discover these places. (Participant Eleven)

His team was asked if they could provide a similar experience that only iwi members could access:

Just recently we have built a platform that operates exactly like Arataki Cultural Trails app but it is for iwi only and the only difference between [these] is that you can securely log into the iwi app and then based on your user profile you'll be able to access content relevant to your tribal affiliations. (Participant Eleven)

This was prompted by the iwi in his region that saw potential in his app for sharing deeper mātauranga with their own people that would not normally be shared with manuhiri.

Barriers to AR development & adoption

Participants identified funding as a substantial inhibitor to Māori AR development in tourism businesses.

I believe the only barrier to the flourishing of that technology is the cost of it and therefore the access and availability of it, but also the inconvenience of it. (Participant Five)

It's just very expensive and it soaks up a lot of money...which is IT in a nutshell. It's always going to cost money to keep up on any IT platform. (Participant Nine)

In response to a question about the challenges of operating in a Western economic environment, a Māori operator mentioned the difficulty in securing funding which he believes is due to the Māori approach to business which may not hold up well enough against non-Māori businesses.

Number one is getting the putea (money)...so we can start going ahead and building them... the cost of building AR apps is still quite expensive. If artificial intelligence can build our AR markers or our AR characters that would take things off. (Participant Eight)

Another issue related to funding brought up by the participants is how to commercialise such a platform. Participant Four said:

The idea was to get them out and introduce them to our space via technology because of course we were taped to a resource, there's only a few of us guiding, so this is a way in which we could spread ourselves out by building this augmented reality guide. The challenge for us at the time is a) no one had done it and b) how do we commercialise it? (Participant Four)

Participant Two agreed this is an area of uncertainty that will need to be addressed:

But who writes that content? Where's the commercialisation of that content if that happens? (Participant Two)

Other barriers to AR development discussed by interviewees include issues around infrastructure and capability. Participant Four described difficulties in providing internet access in a large outdoor environment:

Our wifi was another issue for us so to get wifi up to the reserve or fiber, was challenging as well and challenging for tourists to download, it was taking a long time for them to download and they don't want to be using their data as well. (Participant Four)

There is a certain amount of intelligence, financial resource, and capability that needs to go into building an app.... as a tool it's great but it's an investment. (Participant Three)

Another pointed out that the apps require maintenance which also incurs cost in keeping the stories and information current and correct:

In the sense that technology is used as a tool....[it] has to be relevant at all times as much as possible for the target audience. (Participant Six)

Conclusion

This chapter presented the empirical findings from the eleven interview transcripts, which was analysed using thematic analysis. The results suggest several ways in which AR aligns with and complements te ao Māori. Furthermore, it indicates the potential for this technology to support Māori to connect with their culture which ultimately enhances Māori wellbeing. This is especially important as participants reiterated that currently there is a lack of Māori youth

in the Tāmaki Makaurau tourism industry, which is impacting negatively on the Māori tourism presence in the region. Therefore, AR appears to add value to Māori tourism experiences as well as present solutions for the continuing impacts of colonisation. The next chapter will present the analysis of the findings in comparison with previous research.

CHAPTER FIVE: Discussion

Introduction

This chapter presents a discussion of empirical research against prior research to contribute to the growing literature of Indigenous use of AR technology and the potential benefits it has for Māori. The findings explored themes which emerged from analysing the data and the responses have been organised according to the research question it relates to. Results of the data analysis indicate AR is an adaptable tool which can be guided by Māori values in order to drive benefits for Māori wellbeing, while also delivering an engaging and novel tourism experience.

The Methodology Chapter outlined the research process of this thesis which aims to investigate the potential of AR to support Māori tourism development in Tāmaki Makaurau. A qualitative approach was used and therefore it is important to note that generalisations cannot be applied outside of the research sample, although some aspects may relate to the wider population (Smythe & Giddings, 2007).

Table 2 is referred to within the discussion of this chapter when drawing conclusions based on the contextual background of the interview participants. All of the participants are based within the greater Tāmaki Makaurau region, except for one who is located in Tauranga. While the research mainly sought to interview those who have experience in Auckland Māori tourism, this participant was included due to his expertise in digital cultural storytelling and being Māori themselves, they had unique insights to offer being Indigenous developers of their own storytelling app.

Research Question One

How do cultural AR tourism experiences align with te ao Māori?

While augmented reality has been gaining traction within the tourism sector over recent years and more Indigenous people have become involved in producing these platforms (Adelson & Olding, 2013; Beltran & Begun, 2014; Hopkins, 2006; Irving & Hoffman, 2014; Wyeld et al., 2007), there has been little research exploring specifically how Māori can utilise this technology. Therefore, the aim of the first research question was to explore the participants' views on the compatibility between te ao Māori values and augmented reality. The findings identified sustainability of the planet and people as a common goal for Māori. Results suggest that participants of this study view AR as an appropriate medium to deliver tourism while also leveraging benefits for Māori.

Māori Values & Commerce

The empirical findings of this study are consistent with previous research that describes the Māori approach to business as holistic, emphasising multifaceted outcomes for people and place in addition to profit (Carr, 2017; Foley, 2008; Spiller et al., 2011). The Māori participants of this study did not consider profit to be the end goal, however, they were just as concerned with generating positive outcomes for their community in relation to cultural, spiritual and social wellbeing. They emphasised the importance of their Māori values such as kaitiakitanga, manaakitanga and whanaungatanga when engaging in tourism and commercialising aspects of one's culture.

In a study by Carr (2007) looking into Māori nature tourism businesses, they found operators were forced to adapt Western management structures in order to appropriately balance capitalist demands with those of te ao Māori. Likewise, in this study several conflicts between the Māori and the Western approach to business were identified but it was agreed that tikanga provides a competent framework for addressing modern issues through a te ao Māori lens. These operators described using their cultural framework as an effective way navigating the unavoidable aspects of business which include needing to make a profit and deciding what aspects of the culture they are willing to commercialise (Fletcher et al., 2016; Spiller et al., 2011). Participant Five stated the Western economy has separated wellbeing from business

in order to focus on economic gains, whereas Māori are motivated by whānau wellbeing. This aligns with Foley's (2008) research examining the bottom line for Māori businesses, as he concluded that they use Indigenous values and culture to guide businesses practices and focus the outcomes of the operation.

The results are consistent with past studies which found that Indigenous peoples, and specifically Māori, consider alternative bottom lines in addition to profit to include people and place (Carr, 2007; Foley, 2008). All of the Māori operators mentioned at some point in their interview that their business activities ultimately contribute to the betterment of Māori wellbeing. Past research has found tourism often falls short in providing effective sustainable development for Indigenous peoples due to the Western-centric objectives that are individualistic and profit-driven (Higgins-Desbiolles, 2006; Hillmer-Pegram, 2016; Sharpley, 2000; Whitford & Ruhanen, 2010). However, Indigenous businesses are utilising cultural values to inform their practices and feed back into community wellbeing in order to meet their needs (Carr, 2007; Spiller et al., 2011; Zapalska & Brozik, 2017). The Māori operators also discussed the integration of their cultural values with their business approach as a natural and essential extension of their Māoritanga. Although they recognised some compromises need to be made when operating under Western frameworks, participants found they were not inhibited from applying their worldview and values within tourism.

Tino rangatiratanga

A few of the Māori participants expressed frustration from feeling like an after-thought when governments are developing strategies and policies. This corroborates Hall's (2007) criticism of governments that involve Indigenous people after decisions have already been made, reducing the Indigenous community to a 'tokenism' (p. 310) role in the planning process. Other academics have stressed that Indigenous people cannot successfully empower themselves until the solutions originate from within the communities (Morris & Meadows, 2000; Pereiro, 2013). A participant repeated these exact sentiments by stating that Māori must be enabled to operate under their own framework and to do so they must first become the decision-makers. These findings support a key point highlighted in the literature review which argues that tourism development must be developed in alignment with Indigenous

interests in order for the relationship between tourism and culture to be sustainable (Bunten, 2010; Lai, 2014; McIntosh et al., 2002).

Māori are determining for themselves what their aspirations are for tourism development and this is evident in Auckland with the formation of Ngā Iwi o Tāmaki (2019), a multiple tribal entity comprised of 'a coalition of the willing' (p. 7). Despite regional, national and industry tourism strategy plans in Aotearoa heavily using sustainability language, specifically Māori terms such as kaitiakitanga, Ngā Iwi developed their own Māori tourism strategy. This suggests their goals have not adequately been captured in existing strategies, which could be explained by the results of Whitford and Ruhanen's (2010) study. They found the majority of tourism development approaches adopted by the Australian government largely contained 'sustainability rhetoric' (p. 475) and lacked depth for effective implementation. Similarly, Ryks et al. (2014) noted inconsistencies between regions across New Zealand in the application of sustainable resource management which impacts the ability of iwi to practice kaitiakitanga.

The formation of the Ngā Iwi entity and strategy is an example of 'bottom up' planning which Espeso-Molinero et al. (2016) describe originates from within the community. Several academics have previously criticised government strategies as being inadequate for achieving Indigenous outcomes (Espeso-Molinero et al., 2016; Hillmer-Pegram, 2016; Whitford & Ruhanen, 2010). They attribute this to the capitalist paradigm under which the strategies are created being at directly odds with Indigenous values, prioritising profit over people and place. In 2006, Wikitera identified the lack of a regional strategy which embraces the community, specifically iwi and hapu, as a barrier to Māori tourism development in Auckland.

Kaitiakitanga & Storytelling

The Māori operators of this study identified storytelling as a core aspect of one's identity as Māori, and therefore a core component of Māori tourism experiences. Like many other Indigenous peoples, Māori traditional knowledge is transferred through stories and so the practice itself plays an important role in the continuation of the culture. Lai (2014) specifies one of the main goals of te ao Māori is the sustainability of resources and the environment. They notes that for Māori sustainability includes cultural expressions of song, dance, practices, and protocols in addition to environment. Amoamo (2007a) and Wyeld et al. (2007) support

this in recognising that cultural taonga, specifically stories and songs, are inextricably linked to the land and therefore, intrinsically embedded into Indigenous tourism experiences. A comment made by Participant Eight echoed this exact sentiment, stating, “our stories are inseparably connected within the environment”. A few of the Māori participants drew connections between sharing Māori stories and their duty as kaitiakitanga. One interviewee explained that by developing a relationship to the land through sharing stories, it also reinforces their duty of care over it.

The first research question aimed to investigate how cultural augmented reality tourism experiences fit into the te ao Māori framework. Participants of this study reiterated throughout the interviews that AR is just a tool that can produce positive or negative outcomes depending on how it is used. This aligns with prior studies exploring Indigenous use of digital storytelling platforms which found AR and mediums like it to be an effective, alternative method for traditional oral practices (Cunsolo Willox et al., 2013; Hartsell, 2017; Hopkins, 2006). Beltrán and Begun (2014) presented findings from a digital storytelling workshop within the Aotearoa context, examining its use for sharing Indigenous stories of resilience for healing historical trauma. The results of their research revealed digital storytelling to be a culturally appropriate way of recording Indigenous knowledge and a method which mirrors oral traditions. Other studies also found communicating Indigenous culture this way as an extension of traditional storytelling practices (Adelson & Olding, 2013; Cunsolo Willox et al., 2013; Hartsell, 2017). While not all participants were interested in experiencing digitised experiences themselves, there was a general consensus that AR can adequately supplement traditional forms of Māori storytelling.

Tikanga Māori

Another important aspect of te ao Māori is the protocol of *‘kanohi ki te kanohi’*, or the seen face, which is crucial for establishing relationships and intentions between host and guest (Walker et al., 2006). Tikanga protocols provide a way for groups of Māori to discern the intentions of other groups through cultural practices such as mihimihi (sharing of whakapapa) and hōngi (Māori greeting gesture where both noses touch together to share breath of life). The purpose of these practices is for both sides to be able to determine the intentions of the other by how they respond, and here a decision can be made about what is shared with them.

Bypassing tikanga was of concern to the Māori AR developers involved, who explained they are constantly having to check their practices against tikanga Māori and kaumatua guidance to ensure they are keeping them in balance. Hopkins (2006) asserts that culture is not static and therefore can be adapted to and can adopt new technology. Participants demonstrated this perspective in recognising the potential AR and similar technology as a tool for Indigenous interests.

Māori values and tikanga directly influenced how participants involved in developing Māori AR platforms viewed and approached working with iwi. In te ao Māori, mātauranga is regarded just as valuable as tangible resources like land (Lai, 2014), and this was evident through the language interviewees used when discussing how they manage others' stories. Participant Eleven described their role as being "responsible and committed caretakers" over stories which ultimately is treasured content that forms an essential part of an iwi's identity. Participant Seven and Eight also spoke about the importance of not misrepresenting mana whenua stories even if they are a Māori owned and operated platform themselves. These three participants all emphasized drawing on their cultural values of whanaungatanga, building relationships, as a way to develop trust with iwi and share their stories how they want them to be shared.

Research Question Two

How does Māori tourism delivered through AR support sustainable development?

Although there were different reactions to Māori tourism being delivered and experienced through augmented reality, there was a general consensus that the technology can add value to tourist sites. In particular, participants directly related AR to its potential for storytelling, a core aspect of Māori culture and the Māori tourism experience, and agreed it can uphold Māori values when utilised correctly. The purpose of this research question was to investigate how AR can support tourism development that is sustainable according to te ao Māori. The previous section discussing participants' views on Māori values and tourism are consistent with prior studies which found Māori businesses to prioritise people and place in addition to profit.

Using AR to tell Māori stories

A benefit that several participants emphasized is how AR allows the consumer to experience the story where it is physically based. In Māori culture, one's identity cannot be separated from the land and environment and therefore, they acknowledged that storytelling through AR can directly contribute to their role as kaitiaki. They saw AR as an exciting and engaging way for people to learn Māori stories and more importantly, use the opportunity to educate others on land conservation issues. This ability was seen as an advantage because it allows people to explore and connect with spaces through stories that they may have not visited otherwise or understood the full historical context of (Nórbrega et al., 2017). This is especially important for Tāmaki Makaurau as the Māori tourism offering is currently small and often overlooked due to the nearby regions of the city having the highest number of Māori tourism operations in New Zealand.

The three Māori participants that developed their own platforms (Participant 7, 8 and 11) described storytelling as a tool in itself for addressing environmental issues such as climate change. Their work with iwi and council proved to them that AR is an effective way of disseminating traditional stories and concepts around conservation through a modern medium. Since Māori stories cannot be disconnected from the land and environment, according to participants of the current and prior research (Amoamo, 2007a; Wyeld et al., 2007), Participant Eight and Eleven stated they want to leverage the connection and engagement AR creates between people and places to highlight conservation issues. Indigenous digital storytelling has successfully been used in other studies to communicate issues of sustainable resource management and development (Wyeld et al., 2007). A well noted advantage of AR is the ability to share rich, detailed and engaging information without making physical changes to the site (Cranmer, 2017; tom Dieck & Jung, 2017). This non-intrusive alternative does not require compromises or interference with the site and therefore is compatible from a sustainability perspective. Furthermore, the use of digital mediums at tourism heritage sites has been shown to support the preservation of intangible cultural aspects which ultimately contributes to ensuring the knowledge is accessible for future generations (Bec et al., 2019; Maaiah et al., 2019; Moorhouse et al., 2017; Mortara et al., 2014).

Autonomy

Reiterated throughout Indigenous tourism literature is the need for Indigenous people to have autonomy over their culture and the way it is presented in order for the relationship between the two to be sustainable (McIntosh, 2002; Lai, 2014; Pereiro, 2013). Participant Eleven described his app similarly as “...a digital platform that enables you to share your authentic voice and authentic story at place.” AR provides a medium for people to tell their own stories, in their own words, in the manner in which they want others to hear it (Cunsolo-Wilcox et al., 2019), offering a different perspective to the colonised narrative of New Zealand (Adelson & Olding, 2013). The literature and empirical data show that Indigenous people are also using it as a tool to heal from the impacts of colonisation, namely urbanisation and its impacts on Māori youth, through authentic storytelling (Béltran & Begun, 2014). This contributes to Māori wellbeing by encouraging connection to culture and decolonising the identity of Māori (Adelson & Olding, 2013).

Another benefit to having autonomy over the content, a point raised by one of the AR platforms’ owners is the opportunity it allows them to provide other Māori to gain experience in the technology sector. They explained one of their aspirations for the future is to develop Māori and Pasifika internships so they can learn key business and technical skills, and ultimately become the content creators instead of content consumers. This is another example of the Māori operators using their business as a means to improve the wellbeing of Māori, supplying employment and skill training opportunities.

Technology: Connecting with Maoritanga

Tourism has been criticised as a ‘fix-all’ solution for Indigenous peoples which prioritises profit over sustainable development that ensures benefits are fed back into the communities participating in tourism (Pereiro, 2013; Sharpley, 2000). Therefore, the aim of the second research question was to determine if AR tourism is sustainable according to how Māori define sustainable development.

Previous research shows that Indigenous peoples, including Māori, are utilising digital tools such as virtual and augmented reality to provide a new way of connecting and learning about their culture (Adelson & Olding, 2013; Beltrán & Begun, 2014; Cunsolo Wilcox et al., 2013;

Hopkins, 2006). Storytelling through AR contributes to sustainable development by allowing Māori to reconnect with their roots, histories and ancestors (Cunsolo-Wilcox et al., 2013; Beltrán & Begun, 2014; Wyeld et al., 2007), an important component of the Māori identity and directly relates to one's wellbeing (Spiller et al., 2011). The participants of the present study that have a Māori AR app reiterated throughout their interviews that the technology was never intended to replace the real storytellers and face-to-face experiences. Instead they used language such as "taster", and described it as a "stepping stone" by which the initial contact is made but ultimately users are encouraged to pursue more information afterwards.

In Cunsolo Wilcox et al.'s (2013) research exploring digital storytelling as an emerging method for preserving Indigenous knowledge they state connectedness to one's culture as extremely important for Indigenous communities. This is because it positions an individual within the worldview which determines the relationship between the environment and with other people. Lai (2014) argues that Māori must develop and maintain their connection to their culture to facilitate a greater sense of Indigenous identity, which allows for effective socio-economic development. This result was also found in studies examining Indigenous use of digital storytelling mediums (Beltrán & Begun, 2014; Wyeld et al., 2007).

As mentioned in the literature review, one of the impacts of colonisation in New Zealand was the rapid move of Māori from rural to urban areas. This has been detrimental for Māori cultural wellbeing as many became physically removed from their whenua, iwi and whānau, which together forms a vital part of their Indigenous identity (Barcham, 1998; Beltrán & Begun, 2014; Lai, 2014; Wyeld et al., 2007). This has led to urban Māori typically only experiencing a 'mainstream' version of what it means to be Māori in New Zealand, which often includes negative and racist stereotypes (Beltrán & Begun, 2014; Lai, 2014; Wyeld et al., 2007). The current study found the impact of urbanisation was highlighted throughout the interviews, and it was recognised as an inhibitor to Māori tourism development in Auckland.

While there is a high percentage of Māori in Tāmaki, according to the Independent Māori Statutory Board (2016) 25% of the total Māori population, participants discussed a lack of young Māori in the tourism industry. They attributed this to the difference between how Māori live in close communities within their iwi's region and how urban Māori are often disconnected from this. Beltrán and Begun's (2014) study explored narratives shared through digital storytelling as a means to heal historical trauma passed down Indigenous generations

as a result of colonisation. The participants of their study were also based in Auckland, and the results coincided with the empirical data showing that living in an urban setting disconnected from their whenua and/or iwi has been harmful to their identity as Māori.

Although there was some pushback from participants in this study about experiencing cultural tourism through their device, the majority recognised AR's ability to provide an alternative way of learning about a place using minimal resources. Participant Eleven argued that it is better to have an app available which makes the stories more accessible than have people completely miss them altogether. The owners of ARA Journeys hoped their platform would lead people to the actual storytellers, but recognised there are barriers to Māori pursuing and receiving knowledge the traditional way. Participants acknowledged that it is common for urban Māori to feel whakamā (embarrassed or ashamed) about not knowing how to speak te reo, or their traditional stories. Past research considered an advantage to AR apps is the opportunity it provides for people to experience the information when convenient for them which is useful from a personalized education perspective (Kysela & Štorková, 2015; Tom Dieck & Jung, 2018). The developers of Māori AR apps in this study reiterated this point throughout as it enables those who are whakamā learning about Māori culture to be able to do so at their own pace and within in a culturally safe context.

[Access to Māori knowledge](#)

Importantly, Beltrán and Begun (2014) found growing empirical evidence that one's culture and cultural identity helps to mitigate stressors on Indigenous Communities' health outcomes. Participant Seven stressed that they were motivated to develop ARA Journeys because "Maori are growing up urban and they don't have the same opportunities as others..." who grow up on their marae. The current study found that the disconnect between Māori and their culture as a result of colonisation has caused lasting issues to the transmission of traditional knowledge. Participants were particularly concerned with mātauranga being lost with the passing of the older generation. In response to this, both of the co-founders for ARA as well as Participant Four who was involved in the Ngāti Whātua Ōrākei AR app emphasised that they want to give Māori youth an opportunity to become the content creators by upskilling them through internships.

Participants raised concerns about people preferring to consume the information through their screen rather than interacting with a real guide and real people, which eliminates the importance of the exchange itself. Furthermore, they questioned if the essence of the story is lost in adapting the content to a shortened version for entertainment. The Māori AR app developers affirmed their platforms were never intended to replace real storytellers, but instead act as a connector that encourages users to pursue more information through other mediums.

Education

The ability of AR to provide educational, cultural experiences in a tourism context has been recognised in previous studies (Kysela & Storkova, 2015; Moorhouse et al., 2017; Mortara et al., 2014; Wyeld et al., 2007). In Indigenous tourism specifically, it was seen as another contribution towards culture preservation by giving younger generations access to information that otherwise may have required more formal avenues. This was viewed as a key benefit of AR technology due to its appeal to young people, prompting engagement with Indigenous knowledge and spaces that may normally be overlooked (Irving & Hoffman, 2014).

AR has received substantial research attention for its use within the education sector due to its ability to present information in a novel, engaging way (Bec et al., 2019; Kysela & Štorková, 2015; tom Dieck & Jung, 2018). With this technology, it is now possible to display and demonstrate invisible concepts, stories and events by overlaying them digitally in real life settings which facilitates learning and engagement (Harley et al., 2016; Nincarean et al., 2013). This has shown to increase the competitiveness of tourism sites by adding new value with additional information, re-enacting historical events (Cranmer, 2017) and increasing immersion and connection with the environment and content (Bec et al., 2019; Harley et al., 2016; Nóbrega et al., 2017; Wyeld et al., 2007). In Moorhouse et al.'s (2017) study investigating if AR can enhance learning at cultural heritage sites, they found there was a desire for people to re-visit the museum in order to use the AR app again. Therefore, adding AR to existing and unestablished sites can contribute to the sustainability of the tourism experiences by encouraging repeat visits and educating about the impacts on the site (Cranmer, 2017).

Participants in this study involved in developing Māori apps saw the potential for AR to play a significant role in educating people about not only Māori culture but it can be adapted to other Indigenous cultures as well. Tom Dieck and Jung (2017) found that while youth are more interested by the gamification aspects commonly found in AR apps, including ARA Journeys, it can still provide an enhanced cultural experience for all age groups. This was corroborated by Participant Eight who described the reaction of wonder and excitement they receive when adults use their app. Past research found AR to be an appropriate tool for learning within education settings, specifically for history and social science subjects (Nincarean et al., 2013). According to Kysela and Štorková (2015) it becomes more effective when students are actively engaging with the content rather than just consuming it. Harley et al. (2016) found AR to be useful in the context of learning history in a tertiary environment, demonstrating further potential beyond secondary school for field trips. This indicates potential for the school market within tourism, which is important for offsetting the impacts of high and low periods in the industry.

Context-based learning

Another thing which was heavily emphasized by the Māori app developers, was the importance of maintaining the connection between the story and the physical place it relates to. Importantly, this aligns with tikanga by not removing the stories from their intended context. Wyeld et al. (2007) argue that the environment is not just a passive backdrop, but instead it is an active participant which aids in the telling of the story. Participants Eight and Eleven found visual connections to be a transformative aspect which can influence one's perspective towards the land and reinforce their relationship to it, ultimately spreading awareness about sustainability issues. They claimed being physically present while learning about a place makes the story more engaging and ultimately has a bigger impact on the person. Similarly, Maaiah et al., (2019) found that AR apps have a remarkable ability to foster relationships one's surroundings and enables tourists to experience the spirit of the place throughout different time periods. Participant Eight was especially passionate about using Journeys of Manu as an innovative tool for strengthening te reo, feeding into cultural sustainability outcomes.

A counter argument presented by a few participants is the belief that technology creates more disconnection than it creates connection with one's environment. While this is a common perception, there is evidence that context-based AR experiences can increase connection, immersion and engagement with the environment and content (Harley et al., 2016; Nóbrega et al., 2017; Wyeld et al., 2007). Despite what is evidenced in the literature, this concern was also raised by the AR operators who acknowledged this is something they are cautious of when developing the content. The owners of two of the AR platforms discussed wanting to change how much time is spent looking at the phone versus being engaged in the environment around them. AR is commonly thought of in terms of the visual aspects that it can superimpose into an environment, however it can also include other senses such as audio. The developers of one the platforms are interested in addressing this issue by exploring how they can provide an immersive, educational experience by only using audio.

Research Question Three

What opportunities are available for AR Māori cultural tourism in Tāmaki Makaurau?

Māori tourism in Tāmaki Makaurau

Due to the small number of Māori operators Tāmaki Makaurau has maintained over the years, the aim of this research initially was to find opportunities for further development in order to raise the Māori tourism profile of the region. Therefore, the final research question investigated what the current possibilities are within the context of Tāmaki Makaurau.

Authenticity

The previous section outlined what was emphasized throughout the interviews by participants, which is that Māori are suffering from a disconnect to their culture and it is negatively impacting the Māori tourism offering in Tāmaki Makaurau. They attributed this to Māori growing up in an urban setting removed from their iwi and therefore cultural identity, meaning they may not know traditional knowledge or stories to be able to authentically share in a tourism context. By making it easier for Māori youth to engage with te ao Māori even if they are unable to do so through their own iwi affiliations.

There are a large number of iwi (19) located in Tāmaki Makaurau and the discrepancies between different narratives concerning the same spaces was highlighted as a potential area of disagreement over who has the ‘true’ story. Despite potential conflict, Bec et al. (2019) states varying perspectives of history can form the basis of a memorable tourism experience, “thus turning urban environments into a stage on which the narrative unfolds” (p. 2). Again, the Māori AR app developers reiterated the current opportunity for sharing authentic iwi narratives, which they aim to support by empowering iwi on their platforms and respecting their taonga. Adelson and Olding (2013) and Cunsolo Willox et al. (2013) found in their studies that sharing narratives through digital storytelling is a transformative tool which contributes to the decolonisation process, and therefore Indigenous wellbeing.

Interest from iwi

The AR Māori operators that own platforms for hosting stories claimed they have received a substantial number of positive responses from Māori, with many iwi approaching them to recreate their stories. This indicates there is big interest in AR technology from the supply side. The different iwi collaborating with these participants saw the potential AR apps can have for encouraging tourism as well engaging their own people. Furthermore, Tāmaki Makaurau was identified as an area with rich Māori history due to the 19 recognised iwi in the region. In one instance, an iwi requested their platform on the app to be used by their only own people and required a login. This allowed them to access deeper mātauranga that would not normally be openly share with the public. Therefore, this highlights an opportunity for these iwi to share their stories, creating a blend of narratives for a diverse urban landscape which could help raise the profile of Maori tourism in Auckland.

Surprisingly, one of the AR Māori tourism apps saw a large uptake with domestic users which the operator was surprised by seeing as they had focused their experience towards international tourists. They found locals in particular were extremely engaged in learning stories about places they have lived in for years but did not realise had a connection to mana whenua. This indicates potential for Māori AR experiences to target the domestic visiting family and friends market which has become increasingly important in a post COVID-19 world (Carr, 2020). Further research is required to explore this potential.

Another great advantage to the app is not being constrained by physical resources, for example staff or information signs, meaning less barriers to creating a tourism experience through AR. It was acknowledged that Māori tourism development in Tāmaki is suited to more of a modern approach because of the urban context and the need to differentiate from the traditional experiences offered in surrounding regions. However, AR technology is still relatively new to the general public (Cranmer, 2017) which causes hesitation from with iwi, especially kaumatua, as they are particularly cautious. The Māori AR operators did state that it can be difficult to explain the experience but once others can see it for themselves, they become excited and interested in its potential.

Barriers to AR tourism development & adoption

While there is a growing body of literature, according to Nincarean et al. (2013) knowledge on mobile AR apps was in its infancy less than a decade ago despite AR technology itself being around since the 1960s (Cranmer, 2017, tom Dieck & Jung, 2018). Tāmaki in particular was identified as currently being the most suitable city in New Zealand for this type of experience due to the already existing technological infrastructure it has to support the use of these apps, for example fast and stable internet connection across the cities regions. However, the development and use of AR still requires a lot of technical skill and funding which means the user experience does not always successfully meet the expectation of tourists for engaging and smooth interface design (Cranmer, 2017; tom Dieck & Jung, 2018). Both of which are barriers to the inclusion of Indigenous people in developing, creating and using of these apps (Adelson & Olding, 2013), however Maaiah et al. (2019) states the number of AR tourists may increase once proper and affordable apps are distributed. This means further development is required to reduce barriers of funding and capability in order for more people to be able to create their own AR platforms.

Conclusion

The Findings and Discussion chapters presented the analysis of the empirical research and existing literature. The purpose of this thesis was to explore the potential for Māori tourism in Tāmaki Makaurau to be experienced through augmented reality. A kaupapa Māori methodology using qualitative, semi-structured interviews was adopted to understand different viewpoints on the topic and to ensure Māori voices are prioritised in the research.

This thesis explored the use of AR in Indigenous tourism experiences, focusing on its compatibility with te ao Māori and sustainable tourism development. The aim of this chapter is to summarise the key findings and highlight the contribution it makes to existing theory, practice, and future research. The implications of which are considered and discussed within the field of Māori tourism. The limitations of this study and recommendations for future research are outlined.

Key findings

The number of Māori tourism operators has remained low in Tāmaki Makaurau despite being the international gateway for New Zealand (Amoamo, 2007a; NZMTC, 2006; Ryan, 1997). The purpose of this thesis was to explore the potential of AR in tourism to provide a new medium for Māori cultural experiences and examine how this can support sustainable tourism development.

In order to achieve this, three research questions were investigated:

1. How do cultural AR tourism experiences align with te ao Māori?
2. How does Māori tourism delivered through AR support sustainable development?
3. What opportunities are available for AR Māori cultural tourism in Tāmaki Makaurau?

The empirical data from the eleven qualitative interviews was examined using thematic analysis (Braun & Clarke, 2006). From the data analysis, the key constructs of sustainability, cultural tourism development and technology, were considered in relation to existing literature. Due to the methodological approach, an in-depth and detailed understanding can be gained from the small number of participants. However, the small sample and the use of

purpose sampling means these findings cannot be generalised beyond the context of this study.

Research question one

The results of this study are consistent with previous literature which found Māori operators are utilising their cultural values when engaging in business in order to mitigate the demands of a Western-centric, capitalist economy. This has enabled participants to balance the requirements of capitalism such as profit, with the more holistic goals of te ao Māori. Furthermore, their views on AR as an appropriate tool which supports traditional oral practices corroborates studies exploring Indigenous use of AR for storytelling.

Research question two

The analysis of data revealed various ways in which the participants believe AR can support sustainable Māori development. The ability to combine storytelling with conservation issues was identified as an advantage in the interviews as it provides an opportunity to share awareness with minimal physical impact to the site itself. Furthermore, it allows Māori to retain autonomy over the content which has previously been argued to be a requirement for true sustainable Indigenous tourism development.

An interesting result found that although these apps are created with tourists in mind, the founders spoke in-depth about the possibilities it has for connecting Māori youth to their culture. This was an area of particular concern for participants as they stated aspirations for their app to encourage more Māori to learn their heritage in order to enhance Māori community and whānau wellbeing. Participants identified several ways that AR apps can support cultural revitalisation through engaging, immersive, and educational experiences which was consistent with findings from previous literature.

Research question three

The final research question explored the current opportunities for AR Māori cultural tourism in Tāmaki Makaurau. Interestingly, participants saw these AR platforms as a way of addressing

the issue of Māori youth growing up in urban environments and living disconnected from their culture, which they saw as directly impacting the current lack of Māori tourism in Auckland. Iwi have shown high interest in being able to share stories with tourists as well as deeper Māori knowledge with members of their iwi, in order to encourage more Māori to connect with their cultural identity.

Previous literature pointed out that AR is still in the early stages of development and therefore the cost and capabilities of this technology are barriers to wider adoption and use. However, Tāmaki Makaurau was identified as the best location in New Zealand for AR cultural tourism as it has the best infrastructure, development and network capabilities. Furthermore, there is a large number of iwi in the region which if supported to share their stories through AR can create a rich portfolio of stories across the city.

Contribution to theory, research, and practice

This thesis has investigated the intersection of culture, technology and sustainable development within the context of Māori tourism in Tāmaki Makaurau. The analysis of the findings with existing literature has provided an exploration into the benefits and potential of AR in Indigenous tourism. The results provide a foundation for possible recommendations to support Māori tourism development in Tāmaki, as well as the use of AR in the wider Indigenous tourism context.

Implications

This research builds on existing theories pertaining to Indigenous tourism and Māori tourism, specifically on the use of traditional values and practices to successfully navigate the commercialisation of culture. Furthermore, it also contributes knowledge to the relatively small number of studies analysing Indigenous use of AR to deliver tourism experiences.

This thesis corroborated several past studies which have analysed the use of Indigenous values in commerce, including examples set in tourism, and has extended current knowledge by investigating this within the context of AR tourism (Bunten, 2010; Carr, 2017; Foley, 2008; McIntosh et al., 2004; Spiller et al., 2011; Zapalska & Brozik, 2017). Although the literature

has already established a general idea of Indigenous values and how they directly influence business practices, this study aimed to analyse the application of a te ao Māori worldview to an AR platform. The findings demonstrate that Māori values can successfully be applied to tourism experiences delivered through AR, which makes a case for Māori to continue pursuing innovative ways of disseminating and preserving their culture.

The focus of this study was to investigate the compatibility of te ao Māori with new developing technologies, however there are areas which have been identified for future research. While Maori voices were prioritised in the data collection regarding the development of such apps and how they can serve Maori cultural experiences, further research could explore user-acceptance from the consumers' perspective. This would be crucial to understand if tourists are wanting to experience cultural tourism through this medium.

It is recommended that future research explore different models of AR implementation, specifically within Indigenous tourism. This is to build upon this thesis and existing studies by providing practical models and suggestions for implementation so that communities interested in using this technology can have working models to emulate and adapt to their needs.

The results of this thesis are useful to practitioners and Indigenous tourism operators because it further develops the evidence demonstrating AR is capable of providing immersive, entertaining and engaging experiences for tourists. AR is still a new, largely misunderstood concept to the general public, despite popular mobile games such as *Pokémon Go!* bringing it into mainstream knowledge. Therefore, there is a need to support the proof of concept so operators and developers are encouraged to create tourism products using AR as a tool to enhance the overall experience. Whether the app becomes the entire tourism product itself or elements of AR are incorporated into an existing experience, there is potential for Maori operators to benefit from this technology.

Limitations

This thesis was implemented a Kaupapa Māori methodology (source), using semi-structured qualitative interviews to explore the potential of AR to support Māori tourism development

in Tāmaki Makaurau. The major limitations of this research were related to the chosen methodological approach.

Firstly, Smith's (2012) concept of Kaupapa Māori underpinned the research design which provides more of a framework to be interpreted rather than a strict set of steps to follow. Therefore, there are many ways to apply Kaupapa Māori in research and can be criticised for the difficulties in reproducing results. However, these are common issues in qualitative research and this limitation has been addressed in the methodology chapter.

Secondly, the findings are unable to be generalised to all Māori tourism operators due to the use of the purposive sampling method. This method of recruiting participants also impacted on the demographic makeup of the participants, such as their age, technical skill and expertise on the topic. However, these issues are known to be common problems in qualitative research and the limitations of such are dissected in the methodology chapter. Moreover, the aim of this inquiry was to form an in-depth investigation into AR and its possibilities for Māori tourism development, therefore the limitation being unable to generalise the results was of less significance.

Lastly, the interviews utilised a semi-structured approach where indicative questions were prepared beforehand but the flow of the kōrero and the whakaaro of the participant ultimately directed the discussion. This was to ensure important topics relating to the research question were covered while also allowing the participant to expand on their views (Gray, 2014). The use of unplanned questions also allows new directions in the research to be pursued and can provide an in-depth view and understanding of the experience (Bryman, 2012). Due to the nature of semi-structured interviews, not all of the same topics were discussed across the interviews which can lead to discrepancies between the data. Care was taken in ensuring a sound methodology was followed in order to minimise this limitation. Furthermore, verbatim quotes have been applied throughout the Findings and Discussion Chapters to verify and support the findings.

Although there are limitations to this research, they do not devalue the significance of the results, or the contribution this thesis has made to theory and practice regarding AR and Māori tourism development. This study has added value to existing scientific knowledge on this topic which can be used for recommendations for further research, theory and practice.

This thesis has acknowledged its own limitations in order to provide possible areas for future research.

The results of the data analysis indicate AR is an appropriate tool which can be adapted to fit within cultural frameworks, such as te ao Māori. Furthermore, participants of this study and past literature outlined several ways which AR can provide engaging and immersive cultural experiences while also contributing to wellbeing outcomes for Māori. This research has contributed an in-depth look into the potential of AR for future sustainable Māori tourism development in Tāmaki Makaurau.

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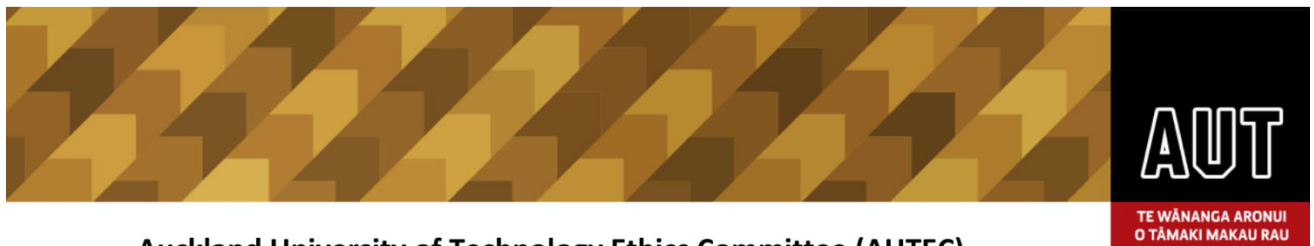
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Appendices

Appendix A: Ethics approval



Auckland University of Technology Ethics Committee (AUTEC)

Auckland University of Technology
D-88, Private Bag 92006, Auckland 1142, NZ
T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

13 September 2018

Keri-Anne Wikitera
Faculty of Culture and Society

Dear Keri-Anne

Ethics Application:18/336 **Maori-centred tourism supporting development in Tamaki Makaurau**

I wish to advise you that the Auckland University of Technology Ethics Committee (AUTEC) has **approved** your ethics application at its meeting of 10 September 2018.

This approval is for three years, expiring 10 September 2021.

Standard Conditions of Approval

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through <http://www.aut.ac.nz/research/researchethics>.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through <http://www.aut.ac.nz/research/researchethics>.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: <http://www.aut.ac.nz/research/researchethics>.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. You are reminded that it is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

For any enquiries please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

Cc: jadeharvey@gmail.com; Hamish Bremner



Participant Information Sheet

Date Information Sheet Produced:

29 May 2019

Project Title

Māori-Centred Tourism Supporting Tourism Development in Tāmaki Makaurau

An Invitation

Kia ora, my name is Jade Harvey and I am a postgraduate student at AUT. I would like to invite you to participate in my research which will be presented as a Master's thesis and contribute to achieving my Master of International Tourism Management. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you.

What is the purpose of this research?

The purpose of this research is to provide insight into how Māori-Centred Tourism can support further Māori tourism development in Tāmaki Makaurau, and as a result encourage benefits for Māori through tourism. This may manifest as a framework or recommendations derived from the analysis of Māori-Centred Tourism which can then be implemented in business practices. For the wider community, this research aims to support tourism development in Auckland, which can result in benefits to the economy such as jobs, especially for Māori. This research will be presented as a Master's thesis which will contribute to achieving my Masters of International Tourism Management qualification. The research may be presented in a journal article, conference paper and other academic publications and presentations.

How was I identified and why am I being invited to participate in this research?

You have been identified as a potential participant because of your involvement, experience and expertise of Māori tourism in Auckland. Furthermore, you have been selected based on the anticipated contributions you can make to this study.

Your contact details have been obtained through public information or you have been sent this through a mutual contact.

How do I agree to participate in this research?

If you would like to participate, please contact me at the details below. As part of participating, you will need to complete a consent form which will be provided to you prior to the interview.

You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

This project involves collecting knowledge from participants about Māori tourism development in Auckland and in particular their views on Maori-Centred Tourism. As a participant, you will be interviewed and asked to share your thoughts/experience of the aforementioned topic. The collected data from all participants will then be analysed with the results informing how Māori-Centred Tourism can be used to further support tourism development for Māori in Tāmaki Makaurau.

What are the discomforts and risks?

Possible discomforts and risks include privacy, confidentiality and the possibility that there are some questions which you are not prepared to answer, make you feel uncomfortable, or are not willing to share information/opinions on certain areas.

How will these discomforts and risks be alleviated?

If you want your information to be confidential and your privacy protected then we will ensure that your data is unidentifiable to you to the best of our abilities. However, given that the Māori tourism industry in



Auckland is relatively small, before you agree to participate it is important you are aware there is a possibility that your data may be linked back to you.

In terms of interview questions, you may request to be sent a list of preliminary questions. You are at liberty to decline responding to any question you feel uncomfortable answering anytime throughout the interview.

What are the benefits?

As a token of appreciation and value of your time, there will be koha provided to you.

This research also provides you with a chance to share your experiences which will contribute to current knowledge about Māori tourism. This research aims to provide insights to the Māori tourism industry in Auckland which may benefit your business as well as the Māori community.

This study benefits myself, the researcher, by contributing to the achievement of my Master's of International Tourism Management.

How will my privacy be protected?

Your privacy is of high importance and if you don't wish to be identified in the study, you will be given a pseudonym. In this instance, only the primary researcher (Jade Harvey) and supervisors (Dr. Keri-Anne Wikitera & Dr. Hamish Bremner) will have access to your data and information.

What are the costs of participating in this research?

The initial interview will be from 1 – 1.5 hours long, with a possible follow up interview if further clarification is required.

What opportunity do I have to consider this invitation?

You have two weeks to consider participating in this research after which I will follow up via email if there has been no response.

Will I receive feedback on the results of this research?

Results will be shared directly with you through ongoing email communications and a copy of the thesis will be made available if you indicate that you would like to receive it. A 1 – 2 page summary will also be sent to you of the findings.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Keri-Anne Wikitera, keri-anne.wikitera@aut.ac.nz, 09 921 9999 ext 5781.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTC, Kate O'Connor, ethics@aut.ac.nz, 09 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Jade Harvey

E: jade.harvey@aut.ac.nz

Project Supervisor Contact Details:

Dr Keri-Anne Wikitera, keri-anne.wikitera@aut.ac.nz, 09 921 9999 ext 5781

Dr Hamish Bremner, hamish.bremner@aut.ac.nz, 09 921 9999 ext 5898

Approved by the Auckland University of Technology Ethics Committee on 10/09/2018 for three years, AUTC Reference number 18/366.



Consent Form

Project title: *Māori-Centered Tourism Supporting Tourism Development in Tāmaki Makaurau*

Project Supervisor: *Dr. Keri-Anne Wikitera & Dr. Hamish Bremner*

Researcher: *Jade Harvey*

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated 29 May 2019.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ☐ I understand that the transcription of my interview may be done by a professional who has signed a confidentiality agreement.
- ☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ☐ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ☐ I understand that I have the option to be identified or remain confidential in the data, in which case I will be assigned a pseudonym.
- ☐ I wish for my information to remain confidential (please tick one): Yes ☐ No ☐
- ☐ I agree to take part in this research.
- ☐ I wish to receive a summary of the research findings (please tick one): Yes ☐ No ☐

Participant's signature:

Participant's name:

Participant's Contact Details (if appropriate):

.....
.....
.....
.....

Date:

Approved by the Auckland University of Technology Ethics Committee on 10/09/2018 AUTEK Reference number 18/366

Note: The Participant should retain a copy of this form.

Appendix D: List of iwi in Tāmaki Makaurau

Ngāti Wai

Ngāti Manuhiri

Ngāti Rehua Ngāti Wai ki Aotea

Te Rūnanga o Ngāti Whātua

Te Uri o Hau

Ngāti Whātua o Kaipara

Ngāti Whātua Ōrākei

Te Kawerau ā Maki

Ngāti Tamaoho

Te Ākitai Waiohua

Ngāi Tai ki Tāmaki

Ngāti Te Ata Waiohua

Te Ahiwaru Waiohua

Waikato-Tainui

Ngāti Paoa

Ngāti Whanaunga

Ngāti Maru

Ngāti Tamaterā

Te Patukirikiri