Developing Digital Media for Museum Exhibitions: 
Environment, Collaboration and Delivery

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Abstract

This thesis explores the development and deployment of digital media in museum exhibitions. This thesis aims to discover how developing digital media contributes to new exhibition methodology and development processes in museums by investigating the development of the Tangata o le Moana exhibition at the Museum of New Zealand Te Papa Tongarewa (Te Papa).

A detailed study of the Tangata o le Moana exhibition at Te Papa, and two digital media elements within it; the New Home: Land of Plenty? video installation, and the Pacific Beats Mixing Booth, are the focus of the research. My experience of the exhibition is recorded. This is followed by participant interviews with the 3D designer and Interpreter. Development documents and organizational archives reveal motivations and goals in developing digital media for exhibitions. In order to place the research in a wider context of exhibition design and visitor behaviour, it focused on three key elements in exhibition creation - environment (the physical and social space), collaboration (the effect of the relationships on development) and delivery (the exhibition). This data is compared with current literature regarding exhibition development. The research demonstrates that by incorporating digital media into exhibitions a new relationship in the exhibition space develops. New museological ideas that place exhibitions in an open-ended framework can align with constructivist learning techniques. Combined with experiential environments and creating liminal experiences, there is significant potential for digital media to contribute to new exhibition methodologies.

The environmental effects of digital media combined with the focus on the media content rather than ‘real things’ indicates a divergence from traditional museum practice. The thesis argues that these experiential and liminal experiences are largely incidental. Narrative forms of exhibition development predominate. This indicates that involving collaborators with expertise in digital media and experience design is not contributing to developing new exhibition practices.
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Chapter 1 Introduction

The opportunities that the digital media format provides in museum exhibitions are intriguing and exciting, but also a little intimidating. As a practitioner who has primarily worked in a regional museum in New Zealand, engaging with this new technology to aid museum interpretation has been both satisfying and frustrating. Satisfying, because by employing digital media in a variety of ways I have seen visitors become more engaged and delighted by exhibition content. Frustrating, because there has been an internal ideological struggle that has seen me attempt to use digital media to create more engaging visitor experiences while endeavouring to ensure that the focus of the exhibit ensures the primacy of the artifacts, ‘the real things’ that museums hold in trust for their communities. This has resulted in half-formed ideas and projects that have initially experiential goals, but eventually return to didactic information delivery via a computer screen in order to support the exhibition narrative.

The difficulty in developing digital media projects outside traditional audio-visual presentations occurred through a combination of a lack of technological expertise within our staff and a determination to ensure that any material presented was fully explained with a strong narrative, whether this be printed (or onscreen) text or delivered via audio. Access to expertise has proven difficult when working in a smaller museum where the level of financial resource generally does not allow for either contracted expertise or indeed opportunities for staff to develop expertise outside the day to day requirements of their positions. From this position, museums that are developing digital media projects consistently through their exhibitions provide examples to aspire to and learn from. These museums do employ staff with different areas of expertise to ‘traditional’ museum skill-sets and do explore new exhibition techniques through engaging with experts from other areas.
This suggests that the exhibition development process is evolving from one where narrative based story telling and a didactic transmission of knowledge are the main method of content delivery to using environmental influences and experiences contribute to knowledge creation in the exhibition user. Furthermore, as the political, social, technological and economic climate within which museums exist changes, so too does their response. As such, museums are trending towards developing exhibitions that encourage more participation from visitors, seek to use first person narratives rather than a curator’s authoritative interpretation and create a more experiential environment.

Increasing the use of digital media in exhibitions is an element that enables exhibition developers to advance this trend, but this thesis questions whether the results of these digital media ‘experiments’ really change how exhibitions are being developed. It contends that by and large, digital media is used as a convenient and familiar method of information delivery that reinforces traditional linear story development and curatorial authority.

This research is important because it describes how and why the use of digital media can enhance knowledge creation in exhibitions. It suggests a way within exhibition development processes that can develop better user experiences and increased knowledge creation for museum visitors.

**Aim of the thesis**

This thesis aims to discover how developing digital media contributes to new exhibition methodology and development processes in museums by investigating the development of the *Tangata o le Moana* exhibition at the Museum of New Zealand Te Papa Tongarewa (Te Papa).
Background

When designing exhibitions, little consideration is given to using the holistic environment as a tool to aid engagement and interpretation. Digital media content is rarely being created to take advantage of the human response to different environments in order to create a more engaging experience of an exhibition as a whole.

The use of technology in museum exhibitions has had a varied history. In some cases institutions and curators have pushed the use of new technologies to provide new experiences, while others have been less enthusiastic (Tallon 2008, Parry 2007).

Since the early 1930s, museums started to use didactic information panels associated with displays to aid interpretation of exhibits. This trend continued through the 1950s as panels became more informative and complex. By the 1960s and 1970s, American museums in particular started hiring professional designers to ‘make museums less forbidding’ (McCarthy 2007: 106).

Parry contends that from the 1960s museums in general have been reluctant to take up the opportunities that the digital world might have afforded them, largely due to two factors; a distrust of the reliability of computer technology, and a belief that in standardizing collection data to be stored in a digital database important information (and indeed the practices that individual curators were used to) would be over-simplified or lost. However he suggests that now the ‘filing cabinet’ museum has evolved into the ‘media museum’ and that this has been a natural evolvement, but that ‘at each turn digital technology appears to have challenged a tenet, a defining characteristic of what a museum is’ (Parry 2007: Ch.7).
It is possible that in part, the ‘challenge’ has resulted in the traditional role that the curator held in an exhibition development being augmented and supported by positions such as Concept Developer or Interpreter in museums like Te Papa and that this in turn has challenged the authority of that role.

The significance of this development is that it would indicate a clear acknowledgement of the importance of the experience the visitor has of an exhibition. Furthermore, a combination of a desire to provide wider ranging experiences to appeal to a broad audience, and to create more thematic environments to assist in articulating the concept of the exhibition to that audience has seen exhibition development require the contribution of a wider range of skill sets than a museum curator has traditionally required. Witcomb (2003: 59) suggests that there has been a shift in emphasis on the role of the museum from ‘collecting, interpreting (and) exhibiting’, to ‘access, social responsibility (and) community involvement’. This change in focus challenges the position of the curator as the ‘authoritative voice’, and suggests an engagement with new museology. This brings to attention the theoretical environment that exhibition developers are working in. Hooper-Greenhill (2000: 153) believes that museums are working towards what she terms the ‘post-museum’ where museums will ‘negotiate responsiveness, encourage mutually nurturing relationships, and celebrate diversity’. This contrasts with the ‘modernist museum’ model where the ‘transmission approach to pedagogy’ is the major form of communication (Hooper-Greenhill 2000: 153).

Although access to hardware and software is becoming much more affordable to deliver digital media in exhibitions, an emphasis on expertise within museums in digital media development is not. As smaller and regional museums develop their own projects, there is a gap, both in accessing expertise of digital media developers (driven by the cost of such expertise), and internal expertise in creating content that
provides more experiential environments. This is hindering the development of projects that might create a more participatory and collaborative environment. The result can be that the digital media is used as a new tool to deliver the curated exhibition narrative in a more modern way that is seen as appealing to younger people in particular, but a wider audience in general.

Exhibitions that are developed in this new technological and theoretical environment require new collaborators to contribute in specialist areas of design and content delivery. These roles will be explored with the further contention that they challenge the traditional role of the curator as the authoritative voice of the content.

There are a number of reasons we are seeing museum exhibitions attracted to the use of digital media to augment (and in some cases, replace) the authentic article. Some of these include it being a convenient method of information delivery. An audio-visual kiosk is able to deliver an enormous amount of digitized information in a small space for a relatively low cost. Such a station might contain photographs, audio or video, pictorial representations and text. It can also allow an exhaustive amount of information to be made accessible to the museum audience, whether this be in the gallery or online. This also makes museum collections more widely accessible, fulfilling another common goal of contemporary museum practice. The role of digital media in addressing accessible design is also a key reason for its popularity. Audiovisuals with captions, for example, will cater to both people with impaired hearing and impaired vision.

It is also able to deliver information in such a way as to vary the learning style that might be targeted – a game or puzzle might be developed to convey a theory or concept. Audience participation can be encouraged by allowing visitors to contribute to the content of the exhibition by providing a means for recording and displaying their stories, while
commercial and marketing reasons provide further impetus towards the use of digital media. The desires to appear contemporary in an increasingly commercial environment, and to maximize appeal to a cross-generational audience are viewed as valid reasons to increase the level of digital media in museums.

The thesis contends that digital media elements within museum exhibitions are primarily born of the desire to provide a ‘contemporary experience’ in a museum. This is directly attributable to the perception that museums need to prove they are no longer dusty storehouses of curiosities but active and dynamic centres of cultural, scientific and social learning.

Merely incorporating digital media into exhibitions through the use of audio-visuals or multimedia stations does not necessarily demonstrate that exhibition development is creating a more inclusive or democratic element. In many cases, the kiosks can be equated to ‘digital labels’, where the information, rather than printed on card and placed by an object is delivered via a computer screen and illustrated with photographs, or augmented with audio.

Therefore, it is not the media or technology that creates the contemporary museum experience, but how that technology is applied. Furthermore, Witcomb (2003: 130) contends that:

Exhibition spaces need to be reconceptualized as having to be interactive in themselves. This requires museums to move away from the didactic, hierarchical model of communication towards an understanding of exhibition narratives as polysemic and open ended.

By incorporating digital media into interactive exhibitions a new relationship in the space develops. The visitor experiences a
conceptualized and stylized physical space which is intended to not only assist in setting a tone but also to communicate (Lorenc, Skolnick & Berger 2007: 8). The ability of digital media to engage the senses then creates its own space so that the visitor is experiencing spaces within spaces. Austin (1999) discusses this in the context of an exhibition within a museum, which has its own environmental language as an entity. Therefore the digital media in an exhibition forms a space within a space within a space. The integration of the digital and the physical into a coherent and meaningful environment requires mediating and managing. This brings to the exhibition development table a further collaborator – the digital media developer.

Scope

Hence the thesis explores the development of *Tangata o le Moana* and its key digital media components through an analysis across three key themes: environment, collaboration and delivery. These three strands were determined to be important themes to investigate as they cover the major areas of exhibition development that allow me to focus on relationships and results.

Environment

The Cambridge Dictionaries Online (2011) defines environment as ‘the conditions that you live or work in and the way that they influence how you feel or how effectively you can work’. Environment in the context of this thesis involves both the physical and mental space that the exhibition visitor is placed in. An environment is able to engage all senses. The implication of this is that the exhibition environment is not a series of closed systems where the visitor moves from one display experience to another. The experience a visitor has is not limited to what they are able to see, so the effect of all stimuli in the wider environment becomes part of the experience.
Collaboration

‘When two or more people work together to create or achieve the same thing’ (Cambridge Dictionaries Online 2011). you have collaboration.

In this thesis, collaboration includes both the group of people from different areas of expertise who come together to develop exhibitions, and the different rationales used and procedures for incorporating digital media. How the digital media is developed and how it contributes to the exhibition experience is explored. As the definition states, the goal of the collaborators must be the same.

Delivery

To ‘deliver’ is to achieve or produce; to do something as promised’ (Cambridge Dictionaries Online 2011). In this context it refers to both the method of interface between the user and the media, and the context, both physically and interpretively, within which the media is placed. The ‘delivery’ is the result of the collaborative efforts of the development team.

Objectives

The purpose of the study is to determine whether the use of digital media in museum exhibitions is contributing to a change in philosophy and practice of exhibition development. I wanted to discover if the increasing application of digital media in exhibitions requiring the input of people that come from non-museum backgrounds, but who are concerned with experience and learning design, is contributing to a move away from a traditional narrative style of exhibition development to a more free choice, experiential and visitor focused exhibition style.
Methodology

The *Tangata o le Moana* exhibition at Te Papa was used as a case study for the investigation. A variety of techniques were used to explore the case study. These techniques allowed me to analyse the development and delivery of the exhibition, from which I was able to distill information about the process of development and the resulting delivery of the exhibition.

The research design incorporated an extensive literature search, a first-person account, interviews with key participants, archival searches and a survey. The principles of informed and voluntary consent informed the research design. I briefly outline each component of the research methodology now.

Literature search

Initially the literature search focused on academic analyses of authors’ involvement in exhibition and media developments. This focused on both digital media development as an interpretive tool and how environmental design can affect content in exhibitions. This led to further investigations into environmental effects, and learning techniques focusing on how museum visitors use exhibitions through their response to the environment.

Ethics

Massey University Human Ethics Committee (MUHEC) approved a low risk application to interview participants in the development of *Tangata o le Moana*. The principles established by the university Code of Ethical Conduct were enacted through the provision of an information sheet to participants (see Appendix A). A telephone survey conducted in January 2010 with a variety of museum professionals and one commercial digital
media developer followed the principles of voluntary and informed consent established by MUHEC.

**Interviews**

Interviews with the people involved in the process of incorporating digital media installations into exhibitions reveals the motivations, processes and procedures for developing digital media in a particular way within an exhibition.

Separate interviews with the Lead Interpreter and 3D Designer were conducted. While the interview participants discuss how and why different methods of interpretation are chosen and how these are mediated, developed and incorporated into the exhibition as a whole, the discussions were based on a peer-to-peer relationship rather than a more formal interview. This allowed a greater exploration of issues around team dynamics and the development of ideas, based on shared experiences.

Clayton McGregor has worked at Te Papa since 2002 as a designer. Clayton was the lead spatial designer for *Tangata o le Moana*. Both Sarah and Clayton were heavily involved in the development of the digital media content of the exhibition (personal communication, August 29 2009a).

Sarah Morris, the Lead Interpreter on *Tangata o le Moana* has worked at Te Papa since the 1990s, when she was employed as an Interpreter developing mechanical interactives leading up to the opening of the museum in 1998 (personal communication, August 29 2009b).

To determine wider perceptions of the use of digital media in exhibitions, a telephone survey was carried out. A range of museum professionals from different organizations were contacted, and agreed to discuss
issues around, and their experiences of, digital media development. One commercial developer was also interviewed.

**Research using digital technology**

A written narrative of my experience of the exhibition was prepared as part of the research. This narrative was written in the exhibition, and is augmented with photographs. An objective of the thesis was to explore the impact of the use of the environment as an experiential aid on exhibition development. Therefore video footage provided a better perspective on the impact of changes in environmental conditions, as well as the interactions of a visitor with the exhibition. In the first instance it enhanced my ability to 'return' to the exhibition to reflect upon my experiences and observations rather than purely to experience the exhibition in one environment, and then write about it in another.

**Archival searches**

Both the exhibition and the two digital media developments within the exhibition are assessed in more depth through an analysis of their development documents. The placement and interpretive style of each digital media station is described and assessed in relation to the concept documents. This assists me in corroborating the evidence obtained from the interviews as to how the media was developed, and the nature of the collaborative relationships.

Organizational documentation and publications such as Annual Reports are also analyzed. This allowed me to ‘interview the organization’ by investigating the motivations, expectations and desired results for its exhibition programme and to compare these results with the data gained from the participant interviews.
Limitations

A deliberate choice was made to apply the literature search to practice, rather than academic theory. While a critical review of the exhibition and the digital media stations in comparison to the development documents and formative evaluation provides a means for gauging the success or otherwise of the exhibition and the media stations, any further evidence gathered by summative evaluation would have provided broader evidence of its success or otherwise across the target audience.

More targeted visitor evaluations focused on visitors’ experience of the exhibition would be valuable in assessing the effect the digital media had on experiences, attitudes and learning. As with this research, subjective assessments can be made and the process for development can be recorded however without more involvement from exhibition users, it is difficult to gauge the absolute success of the project.

A further participant interview with the commercial developer involved in the creation of the two installations would have provided a further perspective on the nature of the relationships involved in the creation of the exhibition.

Structure of the thesis

The remainder of this chapter outlines the structure and content of the thesis. This introduction has looked at why I found myself at a point in my practice as a museum professional developing exhibitions, wanting to investigate how to incorporate digital media better in exhibitions developed by museums without readily available access to expertise in this area. This led directly to defining the aim of the thesis; how does developing digital media contribute to new methodology in exhibition creation. How the key research strands of environment, collaboration
and delivery allow the thesis to develop the argument is explained and the methods for data collection are described.

Chapter Two explores literature based around exhibition development and digital media development for exhibitions with a focus on the three key strands, environment, collaboration and delivery.

Chapters Three and Four examine Tangata o le Moana through my experience of the exhibition, participant interviews and the other research techniques described in this chapter. A more in depth analysis of the two key exhibits, New Home: Land of Plenty? and Pacific Beats is provided in these chapters. The data obtained from these chapters provide the evidence presented for discussion in Chapter Five.

Chapter Six draws conclusions from the discussion chapter, highlighting the most significant findings and also suggests future research possibilities.

In this chapter, the aim of the research has been presented and the importance of the research is described. It suggests that the use of digital media in exhibitions can enhance knowledge creation and that the exhibition development process is the primary mechanism for incorporating digital media. Chapter two will explain how and why digital media does contribute to knowledge creation and explores this through literature focused on the roles of environment, collaboration and delivery.
Chapter 2 Environment, Collaboration and Delivery

Background

Environment
Physical space forms just one part of what I term environment. Theories associated with the creation of social space including the concept of liminality, offer new ways to think about museum exhibitions and the use of digital media within them.

Collaboration
Digital media has the potential to impact significantly on visitors’ experiences in exhibitions. The complexity of technology and its rapid evolution makes collaboration a necessity. Forging collaborations with digital media specialists can be challenging. Equally, collaboration within the museum, between museum staff learning to adapt to the use of new technologies, can also be difficult.

Delivery
While at one level digital media and interactives may be deployed as a tool for mediating the relationship between an artefact and the visitor, there are wider ranging issues which suggest that the real issues are around mediating the relationship between museums and their audience (Witcomb 2003: 4). Furthermore, as Witcomb posits, electronic technologies in the form of ‘non-objects’ in museum exhibitions threaten traditional attitudes to objects to the point where the ‘authority of the object to ‘speak’ within a hegemonic system is increasingly being questioned’ (Witcomb 2003: 103).

In exploring delivery, I will look back on some of the key issues around developing the exhibition environment and forging collaborations to
provide new and engaging experiences. To achieve this I will detail some studies of digital media installations, examining the relationships involved in their development and the perceived successes and failures with respect to their objectives.

Andrea Witcomb contends that ‘interactivity’ (and particularly computer-based interactives) are generally thought of as being the domain of ‘museum educators, children’s museums, science centres and multimedia producers rather than history or art curators’ and that this is so because of the emphasis on the technical aspects of interactive creations and a ‘suspicion on the part of curators that interactives are merely a form of entertainment rather than a philosophy which could improve communication’ (Witcomb 2003: 132).

My informal discussions with museum professionals from around New Zealand tend to confirm this assessment. Of the many reasons proffered for attempts to develop interactive media in exhibitions, most were around providing variety in modes of interpretation, or attempts to be relevant in the current technologically savvy climate. Fewer responses were concerned with trying to engage communities in different ways, or involved experimentation with exhibition design and development. In just one instance, a computer system had been utilized to record and display visitor responses to an art exhibition (personal communication, January 2009).

Some suggestions for a rationale for introducing digital media were:

- If it could add something that traditional methods could not
- To provide an ‘x-factor’ in exhibitions
- To compress information
- To provide a more experiential and fun environment

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1 As part of the preliminary background research I conducted a short survey of five museum staff working in New Zealand museums to gauge their perceptions about the purpose, value and current use of digital media in exhibitions. One commercial developer who has a long association developing digital media for many museums, both in New Zealand and internationally also provided his perspectives.
To create an emotional connection
To be able to charge more

For the most part, comments regarding the incorporation of digital media into exhibitions were that it was most important that the ‘media serves the story’ that was being told in the exhibition.

It is, however, collection items – the authentic artifacts and specimens, which are a key ‘unique selling point’ of museums. For some, digital media and interactives can be distracting, interfering with visitors’ interactions with the items on display (Hawkey 2004: 2). Most however recognize an opportunity to promote learning opportunities and experiences that utilizing interactive and digital interpretive devices can provide.

The new museology
Max Ross (2004: 84-5) interprets ‘the new museology’ as having its advent in the 1970s and described it in terms of social change: ‘Older narratives of empire, class, race and science are seen by professionals as inappropriate to the requirements of a pluralistic, multicultural society’.

Hooper-Greenhill (2000: 140-62) argues that multiple voices and contested interpretations have become much more a part of museum exhibitions in what she terms, the ‘post-museum’ and that this is a relatively new development. In her vision of the post-museum, ‘the production of events and exhibitions as conjoint dynamic processes enables the incorporation into the museum of many voices and many perspectives (Hooper-Greenhill 2000: 152). Lord (2006: 7) in an analysis of Foucault’s museum, critiques this interpretation by stating that ‘throughout its (museums) development, the museum represents systems of applying concepts to objects, and is a space for presenting, reflecting upon and contesting the relation between concepts and things. Museums are fundamentally not about objects but about representation...’ The fundamental difference is around how the subjects
are represented. In Hooper-Greenhill’s post-museum, the subjects of the exhibition are given the opportunity to represent themselves. In Lord’s assessment, the museum places the objects in a contestable space.

Ross (2004: 92) explains the difficulty in determining the legitimacy of representation by noting that the idea of ‘culture’ no longer belongs to the western world as a method of asserting superiority over non-western societies: ‘There is now no final standard for defining true knowledge and great art, there can be no legitimate means for differentiating between cultures and belief systems; for evaluating them in relation to each other and ordering them hierarchically.’

Amalgamating these analyses and perspectives suggests to me that current exhibition development practice lies somewhere in the middle. Witcomb (2003: 103) states that new museology sees exhibitions being developed where communities and cultures are engaged and empowered to represent themselves. However museums still control representation and are more comfortable in exhibiting contestable histories, which becomes the mode for engaging communities.

**Cultural organizations and their ‘new democracy’**

The continuing trend for museums’ to be more democratic has seen a significant shift towards the use of ‘shopping mall’ design in exhibitions, and even the architecture of culture and heritage organizations². The proposed upgrade of the National Library of New Zealand building in Wellington includes a huge glass façade. Traditionally, light has been the enemy of collections stored for longevity, but architecturally, the façade is a ‘shop window’ of the products, services, activity and *interactivity* that the library provides. ‘A 21st century library for the digital age will be created’, said Prime Minister Helen Clark upon announcing the development (Dominion Post 2008).

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² See Theodore Dalrymple’s scathing review of Te Papa in a 1999 issue of the *New Statesman* for a description of this style (Dalrymple 1999).
'Learning is driven by the learner' and ‘enriching the user experience’ are terms used by the National Library to express the direction that this 21st century library will take (National Library of New Zealand, 2007). That this mission is still considered controversial (Catherall 2009) demonstrates a wider symptom of the fact that despite forty years since the development of ‘the new museology’ (Ross 2004: 84), museums and other heritage institutions are often still considered to be ‘that oddity which hoards, names and assigns meanings to objects of power’ (Cameron 1995: 48).

Museums have attempted to highlight their new democracy through community engagement and a more democratic approach to content demonstrated through attempts to balance ‘voice’ (that is, an ‘authoritative voice’) compared with a ‘personal perspective’ from primary sources.

In a desire to be at the forefront of the technological age, as centers for the community, and as collectors and communicators of cultural heritage, museums need to attempt to alter negative perceptions through creating surprising, engaging and innovative encounters. One primary vehicle for providing this is through the development of exhibitions. The next section will expand the previously defined strands of environment, collaboration and delivery and their relationship with exhibition development.

**Environment**

‘An exhibition is an environment that communicates’, that is ‘…exhibition design involves itself in creating experiences in real time, utilizing space, movement and memory to facilitate multilayered communication.’ (Lorenc, Skolnick & Berger 2007: 1).
This statement highlights several issues. That environment is important in successful communication, the experience happens in real time and that the communication occurs at different levels and in different formats. The quality of the experience can be related to a combination of the physical architecture creating an environment conducive to the reception of the intended message. This physical environment affects the psychic or emotional environment that aids communication. Figure 1 shows how variables in exhibition production need to be mediated by the user to create the experience.

**Figure 1 Three Variables in exhibition reception**

Each circle represents one variable to be mediated in the exhibition environment. Each crossover represents a relationship between the variables. Once all variables are mediated, the result is the ‘experience’

Parry (2007: 281) acknowledges that ‘environment is an integral aspect of learning.’ The design of any exhibition environment cannot exist separately from the development of the content to be communicated.
The design and integration of digital media content must be considered in this space. As a fourth variable this complicates exhibition creation by creating an added environment. Figure 2 demonstrates that by adding the one further variable, digital space, the relationships requiring mediation become more complex.

**Figure 2 Four Variables in exhibition reception**

By adding one further variable, digital space, the relationships requiring mediation to achieve the ‘experience’ becomes far more complex.

Exhibition designers create this environment, hence the addition of digital space expands and complicates both design elements and the relationships required to deliver the experience.

To look specifically at exhibition development as one element in this communication strategy, once the concept for the exhibition has been decided, designers will address this environment through the development of space.
Space

French sociologist and philosopher Henri Lefebvre was interested in the nature of space as a social construct. He strongly believed that new social relationships call for new space and vice versa. He eloquently described the changing physical space in Paris around the French revolution as ‘the space was both uglified and enlivened, in characteristically bourgeois fashion, through a process of ‘popularization’.’ (Lefebvre 1991: 58).

Parry (2007: 88-92) interprets Lefebrevian space for museums as hyperset, ‘a space in which the modes of spatial production were focused and intensified… Moreover, according to Lefebvre’s philosophy, a museum would be a place where the different realms of space (lived space, representational space, and spatial logic) would form an intense dialectic (trialectic) producing an extraordinary space within any given society’. While The Production of Space is highly politicized, Lefebvre’s exploration of the creation of social space is a valuable perspective, as a method of wresting the mode of exhibition creation away from being traditionally academic and text focused, to more visitor and experience focused. Parry (2007: 92) notes ‘His engagement with space (however useful to us) is a means to an end – an end concerned with social change. ‘To change life’, he fires from the page, ‘we must first change space’.

Through analysis of the parameters and variables of environmental and mental space, with particular reference to these concepts in terms of logos and praxis, where logos is ‘the product of a process of production which is animated by knowledge (the concept) and oriented by consciousness (language, the logos) (Lefebvre 1991: 21), and praxis refers to social activity as opposed to pure theory, particular in regard to human relationships, an hypothesis of social space can be formulated and tested (Lefebvre 2003: 25-26).
Museums are forging new social relationships and digital media is seen as a valuable tool in aiding this. In many ways it could be argued that museums are being both ‘uglified and enlivened’ in the same way Lefebvre argued Paris changed - through the process of popularization. As such, exhibition creators are attempting to create new spaces with new tools that are often unfamiliar to them. In many cases, there is an almost subconscious attempt to achieve this shift in exhibition style, recognizing the desire to develop exhibitions in a more democratic way and to increase visitor interaction with the exhibition, but a lack of background in process and policy leaves developers floundering. Difficulties arise in determining the balance between producing a scholarly work which maintains or enhances the integrity of an organization which is charged with collecting and interpreting the natural or social history of its region and community, and providing an experience that at once appeals to, and can be enjoyed by, both that community and a wider audience.

Lefebvre underlines his belief in the importance of space (both the physical and social realms) in communication by stating, ‘To underestimate, ignore and diminish space amounts to the overestimation of texts, written matter, and writing systems, along with the readable and the visible, to the point of assigning to these a monopoly on intelligibility’ (1991: 62). This is an elegantly articulated tenet for pursuing interpretive solutions beyond text in exhibitions. Digital media is at the forefront of where these solutions are being sought. In the first instance, digital media can be used to elicit emotional responses through drama. It is easier to create a personal connection through audio and video. This ability also brings to the fore issues around authority and representation. Understanding the social space this creates will be crucial to marrying interpretive solutions to exhibition environments.

Discussions with curators, directors and other exhibition developers that work in small to medium museums around the country have reinforced this theory (personal communication, January 2010).
incorporating digital media use in exhibitions has been pursued, it has been seen as an enhancement to the narrative. Exhibition developers have had issues where some museum professionals do not see the value in any digital interpretive solution, and in other cases where staff are looking for a ‘wow-factor’ element to exhibitions without really considering the different issues, both technical and content-wise around this.

One commercial developer commented selecting one media over another is the ‘ooh factor’, not the ‘wow factor’. He distinguished between the two; the ‘wow factor’ is an installation that is impressive for its technological or aesthetic values, whereas the ‘ooh factor’ occurs when ‘something happens that you weren’t expecting which engages the visitor and facilitates learning’ (personal communication, January 2010).

Liminality

Liminality refers to a social and psychological state where ambiguity surrounds the status and state of the individual. The social anthropologist Victor Turner researched and popularized this theory and has described liminality thus:

One’s sense of identity dissolves to some extent, bringing about disorientation, but also the possibility of new perspectives. In addition, liminal individuals have nothing: ‘no status, insignia, secular clothing, rank, kinship position, nothing to demarcate them structurally from their fellows’ (Turner 1969: 95).

In particular, Turner refers to being in transition from one social state to another as 'liminal'. Indeed, 'liminality is regarded as a time and place of withdrawal from normal modes of social action. It can refer to both psychological borders and physical borders. Therefore, the group of liminal individuals is not a typical social hierarchy but a communal group
in which all are equal. Turner refers to this particular social condition as ‘communitas’.

Austin (1999: 35) emphasizes the role of the threshold, the entrance to an exhibition as that place where ‘the everyday world changes to the world of the rare, unfamiliar or exceptional.’ She describes the potential to create ‘spaces which are surprising, awe-inspiring and different, (which) carries the latent power to suspend space and create space for something new’ (Austin 1999: 40). Austin is suggesting that by creating such spaces, exhibition environments become places where the identity and status of the visitor becomes ambiguous, opening up the possibility for change.

The liminality of the ‘threshold’, that sense of anticipation of the unknown, heightens the senses and prepares visitors for the experience. In another sense, experiencing the exhibition can be the liminal experience. It is the experience of the exhibition that changes the state of the visitor. It is the threshold that holds the key to these experiences. Museums have a very public place in their communities. If the purpose of the liminal exhibition is to strip status from participants then it is that first stage that becomes crucial.

Secondly, it can be a renegotiation of the exhibition environment. In this case, the participants are not only the visitors, or ‘users’ of the exhibition, but also the creators – the curators, the designers, and even the organization itself. The implication of this is that the authority of the museum as the guardians and interpreters of ‘the message’ can be renegotiated, and the user is allowed to create their own experiences, and therefore knowledge, as an active participant in the exhibition. While the manner in which visitors engage with an exhibition is personal and subjective, by stepping over the threshold an opportunity for liminality to occur is created. While there is not necessarily a conscious decision to create an exhibition in this way, museums are in a position to take advantage of this social and psychological construct by creating an
environment that places the visitor outside and away from the social and environmental conditions from which they entered.

Digital media can be key in achieving the environmental conditions because of its ability to engage all the senses (with the possible exception of smell). It can also be a large part of the conditions required to renegotiate the social space created by an exhibition. Using digital media to involve visitors in the exhibition may be one strategy in maintaining the liminality of the complete exhibition experience. For example, eliciting stories and memories from visitors allows them to become active creators of content.

Through assessing and amalgamating Lefebvre’s (1991) work concerning the production of social space and Victor Turner’s (1969) exploration of liminality and communitas, exhibition designers can create environments that communicate ideas and effect social interaction.

Digital space (the fifth dimension?) is both a part of and apart from this. The ‘depth’ of space to which the digital realm has access is massive. How this is treated in the physical environment has as much effect on that environment as the effect the environment has on that media. Within an exhibition, the ‘space’ of digital media also brings up issues of absolute time versus relative time. A person makes a conscious decision to visit an exhibition. They may or may not have a good idea of the size and nature of the content of the exhibition. What that visitor will bring is a conscious and absolute period of time that they have to spend in the exhibition. The space the exhibition exists in gives the visitor a sense of how quickly they need to move through the exhibition. Digital media in the form of computer interactives or audiovisual stations confuse this situation. There can no longer be certainty as to how long you may need to stop at one of these stations to carry out an activity, or watch a movie clip. If you are lucky, there might be a label that explains how long you might spend at any given station. The visitor is forced into making decisions on a relative time construct, with regards to whether to
skip or skim areas because of a perceived lack of time, not necessarily a lack of interest. Hence, digital media installations can confuse the environment through a lack of clarity as to purpose.

Having assessed the potential impact of the physical and social environment through concepts developed by Turner (1969) and Lefebvre (1991), I will now investigate the collaborative nature of digital media development and the impact of this on exhibition development.

**Collaboration**

Although the use of digital media in museums is becoming more widespread, the purpose is often less clear. While entertainment – or ‘edutainment’, that is the notion of offering education through entertainment (Japhet in Lepouras 2005: 96), might be a method of marketing the museum to a wider audience, the learning theories applied to the installations need to be carefully designed to ensure that exhibition messages can be communicated to the widest range of visitors.

In this section I will explore the relationships involved in digital media creation and exhibition development. The collaborative relationships include the group of people from different areas of expertise who come together to develop exhibitions.

Stephen Weil (2003: 1) suggests that public perception of what makes a ‘successful museum’ has changed. He considers the key measure of success to be ‘an external consideration of the benefits it provides to the individuals and communities it seeks to serve’ as opposed to ‘an internal assessment of what it might possess’ (2003: 1).

He believes that this change in public perception has created a shift in the measure of success for museums. Previously, a successful ‘output’ might be ‘an exhibition’. That is no longer adequate and delivering
positive ‘outcomes’ is considered a better measure. In striving for better outcomes, Weil believes this ‘opens the door for collaboration’ (2003: 5). While in this instance Weil gives the example of collaboration with local community groups to develop exhibit content, the key thesis is that museums can deliver better outcomes through engaging with external sources in developing exhibitions.

Ross Parry (2007: 4) argues that the role of the curator in exhibition creation is a visible one and that ‘both reader and writer are made aware of the inevitability of each historian’s bias to any given array of evidence’. Parry is making assumptions about the visitor, or ‘reader’ that they will inherently be aware of the writer’s bias and adjust their own learning to take that into account. Andrea Witcomb (2003: 56), on the other hand argues that the focus of museums has changed from ‘collecting, interpreting, exhibiting’ to ‘access, social responsibility, community involvement’. Parry (2007: 26-7) acknowledges this perspective also, noting that in the late 1960s ‘…this was the moment when the shift began from the curator as researcher with ‘their’ collections, to the curator holding the collection in trust for a public who really had a right to know.’

Whether either of these views can be verified fully is doubtful and each indicates the struggle that the industry has adjusting to the ‘new museology’, but the nature of exhibition creation has changed, partly as a response to issues such as these. Larger museums, in particular, are bringing in specialists in concept development, design, writing and interpretation to add to the research skills of the curator. Exhibition creation is now the responsibility of a group of specialist collaborators.

The survey of New Zealand professionals from a variety of organizations brought differing responses as to how collaborative relationships were managed (personal communication, January 2010). One exhibition developer at a city museum believed that often museum staff do not have a clear idea of what they want to achieve with a digital media
installation. Often the purpose of engaging a developer to create an installation or interactive is to provide an ‘x-factor’ in exhibitions, but that lack of clear purpose leads to tension (personal communication January 2010).

A director of a regional museum reported that over time they have built up an excellent relationship with a commercial developer and as a result have started to use a lot of digital media in their exhibitions. Their process has involved discussions with the developer to determine what it is the exhibition team wants to achieve; the developer will return with a developed brief that will then be critiqued by the museum staff. Although the developer creates the content, the museum maintains strong control of the end product.

Discussions with a commercial developer also provided interesting insight. He was extremely aware of the style that a museum he was working with preferred. As an example, he discussed creating interactives for a museum that had a strong narrative style. The concepts delivered were designed to fit with that method of interpretation (personal communication January 2010).

He says that when developing media products, he will get a certain level of direction and content from the museum. His company then does a lot of their own research and manipulates the tone and presentation of the museum content to deliver a product that creates an appropriate environment. Ultimately, their goal is ‘to create the perfect marriage between the needs of the curators and the needs of the visitors’ (personal communication January 2010).

While Hooper-Greenhill (2000), Witcomb (2003) and Ross (2004) all describe how museums focus on representation and community engagement, Silverman and O’Neill (2004: 1) believe that while these concepts and theories have ‘enlightened and informed’ museum practice, ‘for most museum staff, the workday holds little opportunity for
engaging in the development of a deeper and more complex understanding of the museum experience’. As a result the misunderstanding and confusion over exactly what to create an exhibit that delivers an environment conducive to ‘meaning making’ creates conflict (Silverman and O’Neill 2004: 2).

Hence collaborations are sought by museum professionals, however success or otherwise relies on a clarity and consensus on the goal. Silverman and O’Neill (2004) believe that this is often difficult to achieve due to curators’ reluctance to embrace new methods of interpretation and representation while museum educators are more conducive to experimentation.

Collaborations are required within exhibition development teams and with external experts to develop digital media experiences. This research suggests that although the nature of collaboration is that a number of people work towards the same goal, factors that hinder their success are often a lack of clarity of what is trying to be achieved or a reluctance of at least one party to engage fully with the concept.

**Delivery**

The third strand of investigation involves an examination of exhibition delivery. The changing environment that museums operate in has affected exhibition design both in content and style. The issues explored in the sections on environment and collaboration has influenced how museums develop their exhibitions. This section will examine different areas of exhibition production highlighted in the previous sections, using examples from the literature.

**Representation**

As well as a desire to provide more democratic access to museum collections for the general public, utilizing different design and interpretive techniques has also responded to contemporary notions of
how objects / artifacts / taonga are treated. McCarthy (2007: 158) pinpoints these changes when he describes the *Treasures and Landmarks* exhibition at the National Museum in 1990. The new installation was lead by Assistant Director James Mack and followed the *Te Māori* exhibition.

When the ‘Treasures’ exhibition opened at the National Museum in February 1990 it contained the same objects that had been in the Māori Hall for half a century. But the presentation of the *whare, waka* and *pataka*, was very different. *Te Hau ki Turanga* remained in its customary central position, but it was framed by spiky *harakeke* plants. A huge greenstone boulder, representing *mauri* or spiritual essence, sat in the centre of the floor. Approaching the hall through the doors, the visitor saw *Te Hau ki Turanga* in front of them, its façade spotlit against the backdrop of the wall newly painted in pale green and cream with the art deco detailing picked out in ochre. *Te Takanga* loomed out of the darkness, the paua shell eyes of the carved figures flickering in the dim light. Fresh green *kawakawa* leaves were placed on the cases, acknowledging the *taonga* as living symbols of ancestral *mana* (McCarthy 2007: 158).

As McCarthy notes (2007: 159), the layout and lighting were designed to ‘heighten emotion’ and ‘express the spiritual power of Māori *taonga* as ‘living treasures’”. That is, creating a dramatic environment to communicate something about the taonga. The spiritual importance of the taonga on display may well have been interpreted through traditional forms (i.e. text), but the while the visitor might not have read the text, they would be immersed in the emotion of the setting. Despite this, McCarthy contends that this particular exhibition was still based around ‘a Pakeha expression of those aspects of Māori culture that appealed to a national sense of identity’; therefore while the method of display may have been effective, there are still questions over curatorial bias (McCarthy 2007: 159).
Mana Whenua, Te Papa’s response to the Māori Hall of the dominion Museum underwent development with a conscious effort to be led by Māori staff with wide consultation with iwi and a primary target audience of Māori (McCarthy 2007: Ch. 5). While developers were determined to ‘overturn what they felt was a discredited style of museum display’ they were ‘less certain with what to replace it with’ (McCarthy 2007: 179). ‘Multimedia technology such as videos, audios and soundscapes were employed to simulate the life force of object-beings in the act of communicating with the Māori descendents’ (McCarthy 2007: 180).

In discussing his role as concept developer of the Mana Whenua exhibition, Arapata Hakiwai, suggests that the role of curator had shifted to one of facilitator and that this allowed the exhibit to ‘speak with the authority of the people’ (McCarthy 2007: 182).

McCarthy’s investigation of Māori exhibitions at both the Dominion Museum and then Te Papa highlights how both exhibition designs have developed in order to create more emotional experiences, but also the impact that involving the ‘subjects’ of the exhibition more closely in the development of the product has in turn influenced the content. That it is the community that has had a major influence in driving the design and content of the exhibition to be more affective.

The ‘displacement’ of the object

In discussing the development of the USA-Australia gallery in the Australian National Maritime Museum, Andrea Witcomb (2003: Ch. 5) explains that the narrative for the exhibition was developed but without the support of a number of objects. Either objects were not available for long term loan from other institutions, or there were simply none that helped illustrated a particular topic. The exhibition heavily relied upon media in the form of photographs (of both relevant objects and reproductions of historical photographs, graphics and video). Thus an
exhibition was created entirely using digital media, accessed through touch screens (Witcomb 2003: 117).

**Accessing experience**

The Exploratorium in San Francisco trialed RFID (Radio Frequency Identification) systems in their exhibits. Visitors could purchase a tag, which they could then use to record their interaction with the exhibits in the museum. It could activate cameras to take photographs of themselves with the exhibits and transfer the data to a base station. Visitors could then access this data from computer stations in the museum, or from their homes or schools via the Internet. They could then reinforce their learning or further explore the topics (Hsi & Fait 2005).

Here, the Exploratorium is creating space in two ways. First of all, the visitor is afforded the opportunity to retrace their experiences via the Internet. Linked to this is their ability to do this in their own time. While the experience will not be the same, it is not possible to do one without the other. Hein (1998: Ch. 8) refers to a number of visitor studies that show that dwell time at exhibits can be surprisingly short, and that visitors start showing signs of weariness after about 30 minutes. Therefore by ‘leveraging technologies like RFID to bookmark visited exhibits, along with Web-based activities linking related concepts on Web pages, represents a way to learn about science beyond the museum setting and obviate the hurried visitor problem’ (Hsi & Fait 2005: 64).

Beyond the museums walls, the Internet has also become a new space for museums. ‘Specifically, the Web can be seen to offer a new space, time and mode of experience for museum audiences’ (Parry 2007: 98). While some may see the Internet as an avenue for opening access and renegotiating space, Parry continues to steer the use of new media into ‘shifting the curatorial landscape’. This is made possible both by the modular and variable nature of new media, where being modular allows
media to be easily moved, while the variability of digital media allows it to be added to or changed, hence having ‘no finalized moment’ (Parry 2007: 102).

**Sharing authority**

The *LIVE!Label* project was run by the University of Leicester’s Museum Studies Department, and developed a system of displaying text labels on a digital screen which could be remotely updated or changed via a Web based authoring tool. It was envisaged that the labels could be easily changed to highlight different information, whether contextual, promotional, directional or responsive.

For example, a curator could update the label with the latest research, or as in the case of one exhibit at New Walk Museum and Art Gallery, younger visitors were invited to ‘Be a Dinosaur Curator for a day, where the curator could select labels written by visitors, and upload to the LIVE!Label (Parry 2007: Ch. 6). The project found that roughly twenty percent of visitors read the labels, and of those, most did not realize the information was ‘live’. Very few visitors noticed that the labels were ‘date stamped’. The experience of developing the project alongside curators and other museum staff raised interesting issues around curators who ‘...were not explicitly claiming authorship and ownership of their textual content in exhibitions; that (perhaps in an attempt to speak to a myriad learning styles, experience, knowledge levels and modes of visiting) there was a reticence over using a single, consistent curatorial voice’.

This led the researchers to conclude that ‘many museums have still to resolve how authorship, authority and narrativity function in a hypermedia context’ and that there exists a ‘disparity between an on-line provision that was thought to be active and responsive, and on-site (in-gallery) provision that was perceived to be largely and traditionally rigid and unmoved by events and visitors’ (Parry 2007: 116).

I have examined some of the ways in which exhibition development is being influenced by both new museum theory and by engaging
emotional experiences. A further major influence on exhibit design has been research into how to improve the ability of visitors to learn in the museum setting.

Learning

One of the key missions of museums is to provide a learning experience for its visitors. This has been so since the first museums opened as cabinets of curiosities. At their most basic level, they were opened to the public as a means of informing (educating) them about the wider world. According to the International Council of Museums (Desvallées 2010: 31) ‘Museum education can be defined as a set of values, concepts, knowledge and practices aimed at ensuring the visitors’ development; it is a process of acculturation which relies on pedagogical methods, development, fulfillment, and the acquisition of new knowledge.’

Falk (1999: 259) suggests that museums, along with other publicly focused organizations, ‘play a vital role in facilitating public learning.’ There has been a vast amount of research into theories about the way people learn and process information. Having some understanding of these ideas is important in designing museum experiences with the intention of increasing visitors’ knowledge.

To create learning experiences that utilize the varying styles that people learn from, researchers have identified different types of ‘intelligences’ and attempted to cater to these through developing theories of learning. Gardner (in Hooper-Greenhill 1994: Ch.8) identified seven types of intelligences that may affect how an individual learns. These broadly describe the way in which people are able to process and create knowledge through their use of their different abilities and skills (Hooper-Greenhill 1994: 148). While traditionally learning was thought of in terms of ‘verbal and logical – mathematical’ ability, learning theory has been broadly expanded (Hooper-Greenhill 1994: 146-8). Examples of intelligences developed by Gardner include spatial, the ability to form and manipulate mental models, and bodily-kinesthetic, ‘the ability to
solve problems or make products using one’s whole body or parts of the body’ (Hooper-Greenhill 1994: 150).

**Approaches to Learning**

George Hein (1998: 6), described museum learning as ‘active participation of the learner with the environment’. This conception has ‘elevated experience to a more important place’ (Hein 1998: 6). Hein (1998 Ch. 2) identified approaches to learning which are applicable to museum exhibition styles. The *Didactic* model involves a traditional transmission – absorption model of learning, but other modes that Hein identifies include ‘active learning’ where it is acknowledged that learner must ‘make sense out of a range of phenomena’ (1998: 21). ‘Discovery learning’ requires the learner to interact with the material more fundamentally than only absorbing it (Hein 1998: 30). ‘Constructivism’ acknowledges that learning is a process whereby the learner constructs meaning: ‘Constructivist education requires that the conclusions reached by the learner are not validated by whether or not they ‘make sense’ within the constructed reality of the learner … validity arises from the concepts in leading to action (use) and in the consistency of the ideas one with another’ (Hein 1998: 34).

Hein (1998), Griffin (1998) and Falk & Dierking (1995) all believe that museums are institutions where constructivist learning takes place. This is because a museum visit is generally ‘non-directed, exploratory, voluntary and personal’ (Griffin 1998: 2).

**Prior Knowledge**

The role of *prior knowledge* has also been identified as a key element in museum learning. Visitors to museums come with a variety of expectations and knowledge and these will affect how visitors process information. It therefore becomes difficult to predetermine specific learning outcomes for such a broad audience.
Roschelle (1995: 37) contends that ‘prior knowledge often confounds an educator’s best efforts to deliver ideas accurately’. He refers to a body of research that shows that ‘learning proceeds primarily from prior knowledge, and only secondarily from the presented materials’ noting that the prior knowledge a visitor brings to an exhibition is the ‘bane of transmission-absorbption models of learning’ (Roschelle 1995: 37).

As the constructivist theory involves knowledge being created by incorporating ‘new experiences with prior understandings and attitudes’, the role of prior knowledge in a museum setting is extremely important for effective learning (Griffin: 1998: 2). Roschelle (1995: 40) suggests that in order to design learning activities in a museum setting, developers need to take into account prior knowledge, anticipate a long-term learning process, and note that learning depends upon social interaction.

Most frequently, visits are social experiences (Falk & Dierking 1992: 3). Groups such as families, friends and other organized groups (such as school groups) visit museums. This promotes discussion, knowledge sharing and problem solving, adding a further layer of experience to any delivered content.

Research has confirmed that an important driver for museum visits is to have a learning experience. The work of Gardner (in Hooper-Greenhill 1994) established a number of ‘types of intelligences’ that people have that allow us to absorb and construct information (knowledge). Hein (1998) examined these ideas about how people learn. He developed four approaches to learning which bridges a gap between determining how people learn and strategies that help cater to these different intelligences. Falk & Dierking (1995), Griffin (1998) and Roschelle (1995) espouse the importance of prior knowledge in affecting the ability of a museum visitor to create new knowledge or meaning and Roschelle suggests three strategies that can assist in mediating this, highlighting the importance of social interaction. Hence there are a set of conditions
that can be referred to when designing learning experiences in a museum setting.

According to Serrell (in Chang 2006: 126), visitors to exhibitions typically spend less than twenty minutes in exhibitions, and interestingly, less time in larger exhibitions. Durbin (2002: 3) notes that audience research by the Victoria & Albert Museum in London, when preparing for a major redevelopment, discovered that half of all visitors left the lower galleries at the museum within eleven minutes – ‘a shocking figure for anyone who imagined visitors would work their way through sequential text’.

Falk and Dierking (1992) investigated how visitors interact with museum exhibitions over the course of a visit. While they looked at a variety of visitor ‘types’ (from first time visitors through to experienced visitors), in assessing the behaviour of ‘occasional visitors’, they noted that they:

…begin their visit by looking at every object and reading every label. They very quickly learn that there is no future in this undertaking. The decision to stop reading every label occurs somewhere between five and fifteen minutes into the visit for typical inexperienced visitors. After thirty to forty minutes, they become extremely selective about label reading. They only read those labels that satisfy a general curiosity or answer a specific question. (Falk & Dierking 1992: 73)

They note that visitors are generally overwhelmed by the abundance of material and information and therefore tend to be drawn to exhibits that are either ‘visually compelling or intrinsically interesting to them’ (Falk 1992: 67).

Wizevich (1993: 197) examined research on visitor behaviour, and in her study of exhibition development, interpreted Falk and Dierking’s observations on visitor behaviour, noting that visitors focused on details
in exhibitions, rarely amalgamating these into a wider understanding of the overall themes and organization of the exhibition.

Jay Rounds (2004) summary of visitor studies by Falk and Dierking (2000) and Serrell (1998) suggests that, while *at first glance* it seems as if visitors are not using exhibitions intelligently or as intended by the developer, this visitor behaviour is actually employing intelligent strategies that satisfy the needs of the visitor. Rounds investigated visitor behaviour and theorized that what many see as ‘dysfunctional’ visitor strategies are instead very useful ‘curiosity-driven’ visitor behaviour. He describes one particular visiting behaviour as:

> They meander about the museum, sampling randomly here and there, ignoring most of the exhibits, choosing in a seemingly haphazard manner those to which they do attend carefully. After having expended considerable effort to get to the museum, they fail to use the exhibitions in the thorough and systematic way that should reward them with the greatest educational benefits (Rounds 2004: 390).

He suggests two key reasons for this curiosity driven behaviour that he terms ‘*intrinsically* motivated museum visitation’, or ‘acquiring knowledge for which we don’t have a known use’ (2004: 393). The first reason is essentially biological. He contends that ‘evolution may have hardwired us for ‘curiosity’:

> Because things are almost certain to be different in the future, some knowledge that is not needed now will be needed then. However it is impossible to predict what knowledge that will be. Some of the time, it will be highly advantageous to already possess the knowledge when the need suddenly arises, rather than waiting until the need becomes apparent and then seeking the relevant knowledge (Rounds 2004: 393).
His second reason suggests that by being curious, we stockpile ‘useless’ information and this serves to ‘increase our capacity for creative thinking’, for which he refers to the work of Simonton (1999) to explain that when solving problems the conscious mind will often search through connected information – ‘close associations’. However he contends that:

Most highly original ideas are generated by seeing surprising similarities or analogies between things that are generally understood to have nothing to do with one another. These perceptions are called ‘remote associations’ (Rounds 2004: 393).

Rounds notes that learning information that is not specifically required requires a major commitment by an individual (2004: 394). He therefore concludes that this grazing type behaviour, which many believe to exhibit poor use of exhibitions is ‘seen to be intelligent when our evaluation is based on the goals of the visitor, rather than those of the museum’ (2004: 407).

**Exhibit Strategies**

In establishing just what ‘interactive’ means, Witcomb (2003: Ch 6) goes beyond the idea of providing interactive experiences within the exhibition, to creating the exhibition space as an interactive experience. This allows and even encourages the visitor to be able to interact with the space in the way in which best suits them. This may include delivering experiences that allow interactivity, but also encouraging movement within and around exhibitions that allow visitors to easily engage with individual displays that interest them.

The Australian Maritime Museum exhibitions were designed in such a way as to ‘guide the flow of people around the museum, but which would, at the same time, help to establish the separate identity of each exhibit’, however, ‘there was no expectation on the part of designers and
curators that visitors had to see every exhibit in order to fully understand the ‘message’. There was no single message’ (Witcomb 2003: 143-4). Displays were to ‘stand on their own’ within the overall exhibition structure. There is the opportunity for visitors to be able to make ‘connections or contrasts between displays’. She describes the exhibitions as organized around ‘vignettes’, which appears to create a design solution which both caters better for visitor behaviour aligned with Rounds’ curiosity driven approach and also Hein’s vision of a museum exhibition designed for constructivist learning (1998: 35).

**The role of digital media in exhibitions**

The popularity of digital media can be traced to its versatility in being able to provide information that can be overt or be deployed to aid engagement more subversively. It can appeal to different senses. It can be used to play games or as a media for text. It also has vast storage and recall capabilities and can be deployed to record stories, actions and interactions.

While digital media has the ability to aid the achievement of a number of goals in interpretation and visitor engagement there are also other strategies which look at exhibition creation in a holistic manner and attempt to engage the senses in order to place the visitor in a state of mind which aids them in making meaning and creating knowledge. The exhibition environment is a public and social space that is created with the intention of communication.

Exhibition creators trained in disciplines outside traditional specialist museum roles are now far more involved in museum exhibition creation. With this comes a new perspective on creating environments that communicate. This may act as a ‘push’ for exhibitions to be created that are more experiential and have greater variety in interpretive methods and other types of content. Hence the environment created is both an
active and emotional space to engage with, and learn from, on both educational and political levels.

In this chapter, I have explored concepts of space and environment, contemporary practices and literature involving exhibition creation, theories of learning and visitor behaviour in museums. To achieve an analysis, which surveys the scene for digital media development in museum exhibitions I chose to investigate three key strands, environment, collaboration and delivery. Lefebvre’s notion of social space and its creation can be enhanced by the introduction of digital tools in the environment. In turn, this may aid museums in their ability to engage with ideas of social democracy and the new museology.

In the following two chapters, I explore and assess the *Tangata o le Moana* exhibition and key digital media components within it. I then interview key participants in the creation of the exhibition and review internal Te Papa documentation and archives to determine how the increasing use of digital media is impacting on museum exhibition development.
Chapter 3 *Tangata o le Moana* and *New Home: Land of Plenty? 1920 –1980*

The previous chapter explored literature that informs exhibition development, including the creation of social space and learning. It also established a number of reasons why digital media solutions are being sought by exhibition developers, both through literature and discussions with museum professionals. This chapter will explore and describe the *Tangata o le Moana* exhibition at Te Papa. Following this, I investigate the development of the exhibition and two key digital media installations through interviews with key participants and research of development documents.

The investigation is focused on the three key strands of ‘environment’, ‘collaboration’ and ‘delivery’. These were chosen for two reasons. They cover major areas of exhibition development in a holistic manner but also allow me to focus on key relationships and the results and solutions, which develop into the exhibition. The environment strand enables me to assess the overall effect of the exhibition. While the key evidence in the study is gathered from analysis of the development of digital media developments, how they are applied to and effect the exhibition as a whole is important. ‘Collaboration’ provides key insight into the effect on exhibition development that different disciplines bring. In ‘delivery’, the results of the collaborative development can be described and analysed against the data gathered from the research.

The analysis in this chapter relies on three key methodologies. The exhibition walk through describes the experience of the exhibition from a visitor’s perspective. As established in the previous chapter, ‘an exhibition is an environment that communicates’ (Lorenc, Skolnick, Berger 2007: 1). The description of the exhibition provides both an
assessment of the environmental effects on the visitor and should also show evidence of the intentions of the developers. Interviews with the Lead Interpreter and the Exhibition Designer reveal the motivations for developing the exhibition and the media within it, and the effect and impact that this was intended to have on visitors. Reviews of the development documents, and of Te Papa’s Annual Report and Statements of Intent, documents reveal the strategic direction the organization wishes their exhibitions to follow, and therefore, logically the impact it has on the development team.

*Tangata o le Moana* replaced the *Mana Pasifika* exhibition as part of the refreshment of long-term exhibitions in Te Papa. An internal exhibitions team developed the exhibition although there was a high level of consultation with a community reference group (Te Papa 2004a). As is customary with long-term exhibitions at Te Papa, a high level of multimedia is delivered to provide interpretive experiences and maintain Te Papa’s position as a world leader in contemporary museum experiences. The exhibition is described from the perspective of a visitor moving through the space in August 2009.

A more detailed analysis of the *New Home: Land of Plenty?* installation explores how and why digital media was developed to interpret the concept and messages of this segment of the exhibition. The digital media describes the experiences of both migrants and New Zealand born people of Pacific heritage, and the influence and effects on New Zealand society in the period 1920 – 1980.

**Exhibition Walk Through**

Upon reaching Level 4 of Te Papa, I move through the central area of the museum, past the café. To the left there is the *Passports* exhibition, and on the right is a Jeff Thomson corrugated iron Holden stationwagon, *HQ Holden*. In the temporary gallery on the right is the *Reactive*
Architecture exhibition. As I come past Passports, an angled dark brown wall with a subtle Pacific style flower pattern appears around the corner. The spotlit, embossed words greet you: ‘Tangata o le Moana: The story of Pacific people in New Zealand’. At the entrance a large contemporary steel sculpture hangs above a late 19th century vaka (see Figure 3). The pathway past the vaka guides me towards a large stone sculpture. The ambient light is at a reasonably high level. There is some specific spot lighting of displays, but the general lighting creates a sense of comfort. Walls conceal the different areas in the exhibition, but down what appears to be a wide, object-lined corridor, you can see the PlaNet Pasifika Discovery Centre. A large tan wall set in part behind the vaka proclaims ‘He ao, he ao, he ao tea, he ao tea roa! - A cloud, a cloud, a white cloud, a long white cloud!’

A detailed layout of the exhibition can be found in Figure 4 Exhibition Layout, including sections, on the following page.
Figure 4: Exhibition Layout, including thematic sections.
I hear a ‘mash-up’ of sound from all the surrounding galleries, but predominantly the ambient sound of the museum. People in different spaces and the sounds coming from the media in the different exhibitions fill the space.

As I move past the vaka to the sculpture, to my right is a traditional display of Pacific Island material culture, such as tattoo tools from the Society Islands, ear adornment from the Marquesas Islands and hei tiki from New Zealand. The interpretative labels explain how the links between traditional Pacific culture and how that has been transferred to New Zealand. As well as *Ha’amonga mata a Maui*, a sculpture of Maui by Felipe Tohi, there is contemporary art on the wall. Through this entranceway to the exhibition and into the first section, the mix of contemporary art and historical material culture makes clear that this is an exhibition which is both historical and contemporary.

The first interactive device is housed in the wall directly ahead, as I move toward the end of the first passageway. The *Language Barrel* has four rotating barrels that have words in different languages on each segment. The activity involves matching words from different islands that mean the same thing. When I have the four barrels lined up, a recording of person from each of the island groups pronounces their word. I am able to read and hear the similarities in the language, and invited to consider how social links may have influenced this similarity.

A large anchor stone attracts me into a room with dark brown walls and grey carpet. The lighting seems lower than the more open space and I hear the sound of the sea washing against the shore emanating from a touch screen interactive on the left hand wall. There is also a large purple vinyl pattern that runs along the walls, with one white vinyl area. As I move through this area, I come to realize the vinyl is a section plane from a vaka.
The *Voyage to Aotearoa* interactive is a game in which you learn how to build a vaka, and then take part in the complex process of navigating the vaka from the islands to New Zealand. The following displays provide a more traditional form of interpretation with text labels and diagrams. Topics include ‘*Secrets of the Navigators*’, ‘*Ships of the Pacific*’ and ‘*Kupe Stories*’.

‘*Kupe Stories*’ is a touch screen interactive that displays information in the form of maps, videos and photographs, illustrating oral histories of Kupe’s landing in New Zealand with places and objects. Pacific Island people tell the stories. It is a digital interactive which uses digitized archival material augmented with recorded video of people telling the stories of their ancestors. There is no display of collection material that has not been digitized.

It is within this space of the exhibition that sounds from other areas specifically within this exhibition start to become audible as the ambient sounds of the rest of the museum starts to fade out. At times I hear snatches of contemporary Pacific style music and there is also the sporadic sound of chimes that beckon. As a sense of intrigue develops I feel more involved in the exhibition. The aural stimulus has a liminal effect.

As I move back out of the first room, a large model of a vaka on the right of the main corridor becomes the focus of attention. There is a small hands-on display where I can feel some of the materials used in making the vaka. Placed on the wall next to this is another audiovisual display – ‘*Voyage of Rediscovery*’. The stories relate the journeys of contemporary Pacific explorers who have recreated traditional vaka and journeyed through the Pacific using traditional navigational means.

At this point the sounds of the contemporary music seem much louder, but there is also a booth, which is showing a short movie. As well as these sounds there is drumming emanating from the *PlaNet Pasifika*
*Discovery Centre* at the end of the corridor. The combination of these different sounds, which are becoming louder as the visitor moves closer to the sources, help create a real sense of activity in the exhibition.

The movie booth *Journey to a New Land* has been cleverly designed. The recording features actors who have been filmed against a blank background, and have been projected on to glass to appear as if they are on the model vaka. The central character is a young girl relating stories from her grandparents as to how their ancestors would have made the voyage to New Zealand. As she relates information and poses questions, the other actors recreate the stories.

Upon leaving the booth, I am confronted by a Michael Tuffery sculpture, *Pisupo lua afe*, which is a bull constructed from corned beef tins. The platform upon which the sculpture is mounted is slightly to the right of the little theatre that I have just left. Another display area, with a lowered ceiling, and has been constructed using red stained plywood for the walls and red linoleum on the floors creating a very different atmosphere, is slightly to the left (see Figure 5). The first panel is titled ‘*Untold Stories*’.
The combination of the striking Tuffery sculpture, the sound from the Discovery centre and the interesting snatches of contemporary music are quite an attractor. There is a slight dilemma as to which way to go. I make the decision to backtrack and move into section two of the exhibition.

*Pacific visitors and settlers* tell the stories of interactions between New Zealand and the Islands from a ‘second wave’ of contact from the 1700s. The manner of display is much more like that of a traditional museum display – objects in cases with text interpretation. There is one audiovisual which runs for approximately 5 minutes but which requires me to stand in front of it. In this area, I start to hear other audio-visuals from the exhibition. The sound of the contemporary music is louder also. This area opens out into a larger, more open space, although this area is well demarcated using a structure approximately three metres high which has a vaka mounted above it. Beyond this structure, the design becomes lighter, with white cases, and the red linoleum stops – returning to the grey carpet. This keeps me within the ‘red zone’ and continuing on the path.

As I move through the section, the volume of the audio increases as you approach *‘Pacific Blood on the Battlefield’*. This is a shrine-like display of photographs of Pacific Islanders who fought in the wars, with an accompanying case of medals (see Figure 6 overleaf).
A disembodied voice recites names of soldiers. Just behind this is the final display in this area, which discusses the impact of increased tourism to the Pacific Islands in the 1950s. The last display is a postcard wall displaying postcards from the Pacific Islands and discussion on the impact of increased tourism to the Pacific. There is one space where there is a postcard sized screen displaying black and white footage ‘capturing the Pacific charms of Island life’.

Again, the transition into section three is distinctive. The visitor moves through a doorway-sized space, out from the lowered ceiling and the ‘red zone’, into a new space that is more open. The décor returns to the grey and brown of section one (see Figure 7 overleaf).
The first display I am confronted by is four ‘talking portraits’. That is, four discreet units with a television screen, oriented portrait style with a person framed head and shoulder facing the camera directly. Of the four facing you, one is live while the others show stills of the people featured. To the left are the introductory panel and a projected, animated map on the back wall. This highlights the different Island groups. There is a case immediately next to the introductory text panel, which contains artefacts from the period 1900 – 1980.

The New Home: Land of Plenty? segment is designed in such a way that there are three topics, each with four units. A video screen is mounted vertically at head height on each unit. The people featured are all framed head and shoulders, and they are all talking to camera, to give the effect that they are talking to the visitor. The three topics are:

*Arrival: Settling in*
*Integrating: finding a place*
As I move through the sections, one screen of the four becomes live and the person relates a story about the specific topic for a minute or two. When they stop, another begins. They do not seem to run in any particular order, and each person has a number of different stories to tell, so as I move through the space, I can’t predict who is going to start talking. Nor can I be sure if I have heard all there is to hear. Figure 8 shows one section, where the four individuals ‘stand next to each other’. The sense is that you move from one person to the next to hear each story in turn.

On the opposite wall, which you first see through the ‘garden’, are seven inset cases of equal size. Each case has one object and has been selected by one of the people featured in the audiovisuals (see Figure 9 overleaf). There is one case from each of the featured Island groups, and the person has been asked to select an object that ‘represents the idea of home’ (Te Papa 2007a: 33).
While the design suggests that the purpose is to engage me personally, the unpredictability of who is going to ‘talk’ to you next and the knowledge that my presence has no effect on them seems somewhat disassociative.

As I move through to the end of that space you find yourself at the end of the gallery – at an exit point into other exhibitions, but to continue through the exhibition, you turn to the right and find yourself in the lighter, more open plan (and noisy) space – **Section 4 – New Zealand – a Pacific place?**

This area is much more open plan, with two large flat table cases in the centre of the room. There is a stool facing an audio-visual at one end and at the other is the **Pacific Beats** mixing table – the source of the contemporary music (see **Figure 10: New Zealand – A Pacific Place?** overleaf). Along the wall are a number of wall cases.
The first of these Case Histories ‘…guides me through the lows and highs of Pacific people’s recent New Zealand experience – from the dawn raids of the 1970s to the appointment of the first Pacific captain of the All Blacks, New Zealand’s national rugby team.’ On first glance, the case is a jumble of non-related material with no interpretation. However in front of the case are two identical touch screen units with a graphic representation of the cases, which you can scroll along. I am able to select one of the objects in the case and in doing so the interpretation for that material is presented in the form of text and photographs (see Figures 11 and 12 overleaf).
The cases in the centre of the room displays Pacific made and influenced art and artifacts from a more contemporary period. While
some were made in the Pacific, Pacific people in New Zealand made most. In the wall cases on the far right of the space are contemporary Pacific style costumes made by a New Zealand European, an arts collective including Pacific and Māori people, and contemporary costume for traditional Pacific ceremonies. The AV booth consists of 4 videos of ways in which Pacific communities maintain their intangible cultural heritage through arts such as theatre, fashion, and knowledge and Pacific festivals.

The *Pacific Beats* mixing booth is a large structure set against the back wall of the space. The booth is dark, although the walls are covered in posters advertising bands (see Figure 13).

![Figure 13 Pacific Beats Mixing Booth](image)

The table itself is circular and displays album covers. As I touch the table, 6 circles appear. By moving your hand into a circle, a 'sample' of one instrument (or voice) plays. Users mix the tracks by touching different circles at different times. There is no instructional text – it is up to the user to work out how to operate the interactive. There is a real
sense of activity in this area. This is generated by the sound of the mixing table and the audiovisual. The open plan nature of this space also contributes to the sense of activity, as I am more aware of people moving through and around the larger space.

As I move through the rest of gallery space I am led past the mixing booth to more contemporary artworks and the PlaNet Pasifika Discovery Centre. Ultimately, I am led back into the corridor space, which moves back into section one and the entrance of the exhibition.

Although there is a sense of confusion as to whether, or even where the exhibition has finished, in some ways this relates nicely to the fact that this exhibition documents living cultures that are developing and evolving their place in New Zealand society.

**The Developers’ Experience**

**Environment**

*New Home: Land of Plenty? 1920 – 1980* has the video installation as its main focus. Te Papa describe this element of the exhibition as: ‘...the *New Home: Land of Plenty?* Experience, where visitors can wander through a series of audiovisuals in order to create a self-edited, experience about the emotions of Pacific peoples coming to New Zealand to settle in the mid to latter half of the 20th century’ (Te Papa 2006a: 3).

The space that has been created for the section has been purposefully designed to be discreet; in that there is a distinct entrance and exit, but open enough to maintain sightlines to different parts of the exhibition from spaces within the section. The 90% Concept Brief (Te Papa 2007a: 19) states that, ‘Visitors entering Segment Three will again experience a unique change in pace, style and ambience from the previous segments’.
This is, in a large part, created through the way this area has been designed. The walls on either side of the gallery have objects in cases, while a large map black and white map of the Pacific Ocean is projected on the end wall. In the floor area of the space, which is 7.5 metres long by 2 metres wide, are 12 discreet units, grouped into three sections of four. The units are approximately ‘person-sized’ and contain screens mounted in portrait format at around the head height of an average adult. Each screen has a still image of a person, filmed portrait style (head and shoulders). The effect is such that as you move into the space you are immediately confronted by a series of people looking towards you.

The ‘change of pace’ and style is achieved through spatial design aspects and the use of sound, light and colour. The gallery space is narrow, and the colours are predominantly dark. Due to the openness of the exit space, there is plenty of ambient light. As the units in the middle of the gallery produce their own light, there is little spotlighting in this section. The cases are well integrated into the walls of the gallery, and therefore appear to be ancillary to the main content – the audiovisual units.

The sense that the space is active is enhanced by movement of the projection of the map of the Pacific Ocean. ‘The animated Island Nations names will be projected onto the map and appear to be floating out into the segment that speaks of this movement from the Pacific Islands to New Zealand.’ (Te Papa 2007a: 19). This movement coupled with the audio of several of the audiovisuals, as well as the ‘roll call’ you are leaving behind from segment two, and other ambient sounds from the rest of the gallery and the museum help create a sense of busyness.
The initial media brief for the *New Home: Land of Plenty?* audiovisual ‘garden’ states clearly that the twelve units tell the entire storyline of this section of the exhibition. (Te Papa 2006a: 3). As the exhibition developed, further material has been added in the form of related objects and artifacts, but the purpose of these is to support the content of the audiovisuals.

Upon approaching each of the three areas that contain four of the audiovisual units, the visitor is confronted by a still (referred to as a screensaver) of the subject. One of the four screens becomes ‘live’, and the subject relates an experience or anecdote regarding the specific topic that they have been selected to ‘discuss’. Each filmed segment has a maximum running time of 3 minutes. Each subject has a number of edited stories to tell (Figure 14).

Therefore, upon encountering the series of screens – one of them starts to ‘talk’ to you. When that clip finishes, the screen returns to its screensaver mode, and another of the four screens will go live. There
does not appear to be any sequence to the four screens. The order seems random, and the topics of each story are thematically linked, but subjects are independent of each other. These are personal stories and experiences.

Initial drawings for *New Home: Land of Plenty?* show the screens to be at first appearance randomly placed, but a closer inspection shows them to be loosely grouped in their three sections. (Te Papa 2007a: 43).

The three sections are divided by theme, which is described by an accompanying text graphic. The themes are:

- Experiences
- Arriving
- Settling In
- The Changing Neighbourhood

- Integration / encounters with mainstream New Zealand
- Sport
- Racism and Discrimination
- Public Life / Leadership

- Self-Determination
- Religion
- Community / Cultural Organisations
- Radical / Underground (Te Papa 2006a: 6-7)

More specifically the themes are explored through personal stories. For example, the experience of a young Pacific immigrant at school in New Zealand is related through the Governor-General, The Hon Sir Anand Satyanand relating his life stories.
Te Papa (2007a: 6-7) describe the space as

…a twelve screen installation on a human scale populating the space and presenting simple first-person narratives in a consistent visual format. Visitors will be free to navigate through the space, triggering the content by proximity.

The consistent presentation format, both in terms of physical elements and in terms of AV content, will create a distinctive look and feel within the space, giving the AV garden the presence of an installation work rather than being a number of individual AVs.

Focusing on personal recollections of the 1920s to 1980s, visitors will be hooked into exploring the themes of contemporary Pacific peoples immigration, interaction, integration and self-determination in a New Zealand context.

The installation has been created to provide an experience as close to engaging the visitor on a person-to-person basis as could be achieved:

Navigation of the space and activation of the film content will be intuitive and automatic using pressure or proximity sensors to activate audio and / or start individual screen content as a visitor approaches. Visitors will access content by physically moving through the space, not by pushing buttons or touching screens (Te Papa 2007b: 1)

Each discreet unit has a solid-state media player linked to an audiovisual screen, installed as previously described. The media player has the separate interview segments installed as separate tracks. A proximity detector, or floor pad switch activates the video as a visitor approaches the unit. Each media player is set to play the tracks in a set order, so a visitor may activate (unconsciously) one unit several times and get a different audiovisual clip.
As the visitor moves through the garden different clips are played in a seemingly random order. This results in the experience of being in a group of people you engage with, and they tell you a little about their life.

**Collaboration**

There are several aims of the New Home: Land of Plenty? segment which relate to the manner in which both the space and the content has been constructed. The primary aim is to relate stories of the migration of Pacific peoples to New Zealand in the twentieth century through the personal stories of selected migrants. This may have been achieved through a historical overview with examples of the selected people’s personal experience, and a summary of specific events relating to Pacific communities in New Zealand, for example, the 1970s dawn raids. Instead the exhibition team opted for a more experiential device. The video interview material is supported by a case of objects that relates to the people and the topics discussed in the AV garden. For example, one of the interviewees is Bryan Williams, Auckland born but of Samoan heritage. Bryan was an All Black and Ponsonby Rugby Club stalwart. Displayed in the case is a Ponsonby Rugby Club jersey. This has been selected to highlight the links between Bryan Williams and the Pacific Island community more generally, and this particular rugby club. It emphasizes the connection between the main content – the people, their migration and their place in the community, and the second aim of the section – to give visitors a sense of the different Pacific Islands that these people came from. This is achieved through the animated map. Exhibition Designer Clayton McGregor explains the process in determining the suitability of the map:

There’s other media or other displays in that space which talk about the voyage over. We’ve got the Banana boats in there, so it seemed to be a good point to have a map to show where all these seven Island groups were, which we did in a digital
Hence we have the three main interpretive devices to convey the learning outcomes for this section of the exhibition: video interviews, related objects (with labels) and a digitally projected animated map.

The Media Brief (Te Papa 2006b: 5) States that the Conceptual / Communication Objectives of the installation are ‘to present the range of different schemes and mechanisms that encouraged Pacific Island migration to New Zealand’, and ‘to highlight the mass Pacific Island migration between 1920-80 that lead to changes in NZ society’.

It seems the style of audiovisual – that is, recording interviews in a specific, identical style, rather than, for example, using stock footage of the dawn raids, or filming the interview subjects in more natural surrounds, was chosen to support the experiential aims of the installation.

Again, Clayton McGregor elucidates:

…you came through this quite heavy area, the second segment – the political history and the historical elements, and so we thought it’s going to be nice to have a different pace in here – so okay – personal stories, maybe it’s somewhere where we could lounge a bit, bring the experience ‘down’ a little bit in terms of people’s participation, so that is one of the initial thoughts. Then we got into the territory of exploring different experiences and a way of that interface working and there was the engagement – I think there was a decision at that time to film all the footage. Because of the type of the companies we were going to, obviously they wanted to have an input into how that was displayed, so we went into a meeting with them and they came up with a few solutions and a few ideas... But one of
the things that I wanted to get across is that they were personal stories, so there was a design idea to treat these stands as human-sized and scale, hence you’ve got these 12 stations rather than just one (personal communication, 28 August 2009a).

Sarah Morris, Lead Interpreter discusses how the decisions were made to deal with this information in this way:

It was a response to a problem and also a response to community consultation. We had seven main Island groups that we have collections of. But it’s really the people who can bring those stories alive. We have a few objects, but you can’t really write about the dawn raids as well as some one speaking about it. But we didn’t want to make traditional talking head interview things. What it’s ended up as is not what we kind of envisaged, and that’s a lot to do with sound spill – and we do have issues with sound spill in that gallery a lot! It was more an installation. I think it was more a piece of work that we hoped people might get some sort of story and see that there is some conversations. Not particular kind of conversations – its all the parts make a bigger whole… Even though Tangata is a chronological exhibition, I think sometimes we kind of say that because it makes us feel better, people are kind of free-ranging chickens – there are very few people who go through an exhibition – through the chronology. There are some, but people take a little bit from here, and take a little bit from there, so each idea needs to be a whole in itself and you don’t necessarily have to have done ‘that’ to get something over ‘here’. And you don’t need to watch and to listen to all the stories to maybe get something that interests you, or gets your back up (Personal communication, 28 August 2009b).
Hence the way in which this section of the exhibition has been designed has been to emphasise the personal nature of these stories. To reinforce that these are real experiences of real people. The desired effect is to ‘encourage personal identification with the stories’. (Te Papa 2006a: 5). Functionally, a subject that is talking to them engages visitors, directly speaking to them about their particular experience.

Sarah Morris also acknowledges that visitors are unlikely to stand and ensure that they have seen every video. This is an element developed which certainly breaks away from a traditional ‘story focused’ method of delivery.

**Experience**

The Ambience / Experiential Objectives, are to ‘...reach out to visitors, to show them people with whom they can identify (or not), empathise, recognize or reject in terms of their personal experience of connectedness, belonging, isolation, loneliness, love, family, discrimination, homesickness, faith, sense of community, integration, assertion of one self.’ (Te Papa 2006a: 7). Furthermore, ‘It may be a visceral experience, characterized by instinct and emotion rather than intellect, drawing on what the visitor knows and feels to explain what they don’t know’ (Te Papa 2006a: 7).

The brief states that ‘the AV garden is not just supplementary media. The entire storyline will be told through this AV experience’, (Te Papa 2006a: 5). The design of the garden therefore relies on several factors for it to be a success.

As visitors can walk in to the space and start hearing three minute and under fragments of experiences, it will be important that the visitor has some degree of prior knowledge. As visitors may know little, or nothing, about Pacific Islanders migration to New Zealand, and the social and community effects of that migration mechanisms must be in place to
access some relationship. Firstly, the visitor’s prior experience of the exhibition will give some context. The design of the exhibition has the \textit{New Home: Land of Plenty?} segment following through from earlier migration stories, and stories of European (and New Zealand) contact, discovery and interaction from an earlier period, providing at least familiarity with the relationships between them. Secondly, the themes of the stories, in part have been selected to reach out to people’s common experiences of social contact and interactions with different communities and cultures. The method devised to disseminate the content is designed to engage the visitor directly, as if they are part of the conversation. The effect of this is to convince the visitor that because they are engaged in conversation, they are focused and interested.

\section*{Learning}

The learning aims of the installation are also two-fold. There is the more direct story of migration to New Zealand, and the experiences of those migrants. However it also reveals the relationships between the migrant community and New Zealand society. Visitors are expected to amalgamate the different 'conversations' to build a picture of what it was like to be a Pacific Island migrant in New Zealand through that period. While each of the stories may be a part of a generalized social experience, these experiences affect people in very personal ways.

The \textit{New Home: Land of Plenty?} installation was developed in a manner that responds to several issues and problems. Sarah Morris explains why a particular method might be chosen:

\begin{quote}
The content drives the media. You don’t say we’re going to have a computer interactive – what are we going to put on it. We say ‘with this content – what’s is the best way of delivering it. That’s something I have to advocate for a lot – that we don’t say 'all right, we'll have a film – what should the film be about. We’ve got this story – will that work best
\end{quote}
The New Home: Land of Plenty? AV garden was developed because it was seen as an effective way of communicating the personal experiences of migrants to New Zealand. Te Papa (2007c: 3), in the Stage 1 Formative Evaluation of the installation describe the content as ‘presenting stories to visitors that capture the emotions of Pacific peoples coming to New Zealand to settle in the mid to latter half of the twentieth century’.

The learning outcomes of the installation are not simply a didactic description of cause and effect of migration, but the desire to impress upon the visitor the emotional impact on the individual. The method applied to the installation means that there is little overt structure to the information presented. The desire to ‘provide opportunities for different ‘paths’ through space’, as outlined in the brief acknowledge that the visitor is unlikely to stand and watch every screen (Te Papa 2006a: 5). The functionality of the installation is likely to be useful for repeat visits, but many visitors to Te Papa are tourists who may only have the opportunity to visit the museum once.

The collaborative nature of the development resulted in the space that has been created. Sarah Morris talks about choosing a media that is best suited to delivering the content while Clayton McGregor describes his desire to change the mood and the pace of the exhibition as the visitor moves through different spaces. The desire to convey the personal emotions experienced by migrants led to the use of a first person video display technique and the human scale units to display them on.
The organization itself is also an important factor in determining how digital media is used to aid fulfillment of the functions that it is charged with under the Museum of New Zealand Te Papa Tongarewa Act 1992. The Act amalgamated the previous National Museum and National Art Gallery into its present state (which included the commissioning of a new building).

The Act, Part 1, 7 Functions, states that principal functions of the board include:

(e) To exhibit, or make available for exhibition by other public art galleries, museums, and allied organisations, such material from its collections as the Board from time to time determines:

(f) To conduct research into any matter relating to its collections or associated areas of interest and to assist others in such research:

(g) To provide an education service in connection with its collections:

(h) To disseminate information relating to its collections, and to any other matters relating to the Museum and its functions (Museum of New Zealand Te Papa Tongarewa Act 1992: 5).

The desire to use digital media to carry out some of these functions is articulated in various board documents. For example, the 2004 - 2007 Statement of Intent discusses the importance of the refreshment of the long-term exhibitions in the Museum and highlights that, ‘As part of this strategy (of further development), Te Papa will invest a greater portion of its resources to ensure that the long-term exhibitions remain leading edge, including the technology and level of interactivity employed’ (2004b: 10). In Part 2 of the 2009-12 Statement of Intent (2009a: 8-9), Vision, Output, Outcomes and Performance Measures, ‘technology challenges / opportunities’ are seen as being a major external influence as to how Te Papa develops its operations, and this is placed in the
context of the need for Te Papa to ‘deliver a leading museum experience in its second ten years’ (Te Papa 2009a: 8-9).

The Acting Chief Executive and Kaihautu, Michelle Hippolite, in the 2008-9 Annual Report (Te Papa 2009b: 6), highlights the implementation of the Our Space development, noting that the multimedia experience was nominated for a World Summit Award for ‘new technology in different education/exhibition applications’. She goes on to mention the Colossal Squid exhibition, ‘which has a new 3-D theatre’, and Te Papa’s utilization of ‘wide ranging social media to engage with broad audiences’, ensuring that Te Papa ‘continue(s) to lead the world in virtual museum experiences’.

Te Papa is heavily focused on delivering media experiences as part of a modern ‘museum experience’, and there is clear direction to include this across a variety of museum programmes, including exhibitions.

Clayton McGregor suggests that there is an implicit, but not necessarily articulated, intent in using digital media in exhibitions:

There is a proviso and an understanding that we are going to go there. And it came back to, when you look at Day One, where Our Space is now, it is sort of like, ‘okay here’s a new museum and we’re showing the technology of things’, so I think it’s inherent from that. But personally I think shows can be shaped a little bit more in terms of those sort of decisions based on the content (Personal communication, 28 August 2009a).

Hence a culture, or process has developed where Te Papa staff are encouraged and expected to deliver rich multimedia experiences in the exhibition environment. It is the task of the specialists in their fields to collaborate to determine the most appropriate and successful
deployment of that media in both the conceptual space and physical environment.

**Delivery**

*New Home: Land of Plenty?* is a digital media development which presents first hand accounts of settlement and life in New Zealand. In that regard, the media *is* the object. The spatiality of the design becomes part of the interpretive method for the content and therefore the success of the installation depends as much on the effect the media has on the visitor as much as the content of the interviews.

With the space being crucial to the reception of the message, the design of the installation needs to respond and work with the wider museum and exhibition space. Limitations and effects of the space affect the design, which in turn may influence the efficacy of the product. Clayton McGregor feels that the development of the installation, despite going through several design ideas, ended up being slightly more conservative in style than the initial discussions envisaged:

> But we looked at the idea of big bowls of water which were like kava bowl shapes and there were projections from the ceiling and you put your hand in – sort of dipping into stories and maybe get someone come up through that and talk. I put some of those on the table, and I thought they were quite interesting, and I like those personally in terms of how they can be 3 big kava bowls and you can pick out their stories. And another one was maybe an idea where people are sharing stories so you sit down at a big dining table, so that when you sit down you are engaging with a story that comes out of the table. People can engage with each other as well. Funnily enough, it kind of went back to the default position of talking heads in some respects. It may have come about that way – a lot to do with timeframes and budget in the end, in terms of how they were displayed. But one of the things that I
wanted to get across is that they were personal stories, so there was a design idea to treat these stands as human-sized and scale, hence you’ve got these 12 stations rather than just one. So that’s it in a nutshell. That’s kind of the development, without getting into detail of relationships of how those things are worked up. But obviously there is a lot of conversation with interpreters and the digital media developers in terms of how we can do that, and then the fabricators (Personal Communication, 28 August 2009).

Sarah Morris notes that, ‘What it’s ended up as not what we kind of envisaged, and that’s a lot to do with sound spill – and we do have issues with sound spill in that gallery a lot!’ (Personal communication, 28 August 2009b). Hence the desire was to create a social space in order to create an environment where visitors might be comfortable in engaging with people on a personal level. While the end result creates an intimate and engaging atmosphere, which is largely achieved through spatial design elements, including size, sound, light and the ‘garden’ nature of the individual units. What is missing, are the comfortable and familiar surroundings of a social space. Clayton McGregor intimates that this may have been the result of factors such as time and funding, and through discussions and interactions with members of the exhibition development team, the commercial developers and fabricators.

Visitor research suggests that the desire to make the encounter as personal as possible was successful. Although in engaging with the stories, many participants in the formative evaluation found it distracting if more than one screen was active, due to the sound interference (Te Papa 2007c: 10-11). Furthermore, the human scale of each station appears to be successful. While several participants suggested adjustable screen heights would be useful, most participants found the screen heights as suitable, with several participants commenting that the ‘eye-level screens added to the personal experience of Living Portraits’. (Te Papa 2007c: 13). While there is always an option, or temptation, to
add extra media (in the form of text, archival footage or still images), or subtitles to an audiovisual presentation such as this, the decision to make the playback as ‘human’ as possible also seems to have been successful in creating the sense of personal engagement. Some participants in the ‘Under 40’ group tested felt that ‘...subtitles would take away from the engagement with the portraits and it would mean one more thing to read while in the museum’ (Te Papa 2007c: 19).

The mix of subjects also caused some comment in that many participants were attracted to the more well known subjects, for example, the Governor-General, while some preferred the stories from ‘everyday’ people (Te Papa 2007c: 20).

The desire was to provide visitors with the opportunity to ‘create a self-edited, experience about the emotions of Pacific peoples coming to New Zealand to settle in the mid to latter half of the twentieth century.’ (Te Papa 2007b: 3) Formative evaluation suggests that visitors may have struggled to absorb the content of the interviews. ‘Most participants reported that they would not watch all twelve videos. Most people in the Pacific Islands group and the under 40s group felt that they would watch approximately two videos.’ (Te Papa 2007c: 21). Evaluation of the effectiveness of the installation in its complete context, with all ancillary content would be valuable in assessing whether the complete spatial environment has any effect on the reactions of the visitors.

Some of the evaluation participants expressed a desire for more contextual information with the videos. One participant commented, ‘I’d like to have a little plaque saying what, who it is and roughly what they’re talking about so you know which ones you want to even try to engage with because if you’ve got a whole room of them it just takes so long to see all of them and you just want to pick the good ones that you’re going to be interested in’ (Te Papa 2007c: 21). This participant brings an interesting perspective. In one way, the installation has succeeded in allowing the visitor to ‘create a self-edited experience’, however that
participant has voiced dissatisfaction at the lack of a facility to allow them to create that edit at the outset. Summative evaluation might discover whether this ability to self-edit is enhanced by the presence of the physical content of *New Home: Land of Plenty*?

The ArtLinks study argued that ‘...most people see the main goal of museum-going as learning, and see the role of technology in museums as a provider of factual information’ (Cosley et al., 2008: 406). It may be that the lack of contextual information surprised the participants of the study. Overall the installation received an average rating of 7.1 / 10 for its overall experience (Te Papa 2007c: 4). This indicates that participants felt satisfied with their experience and learning outcomes.

Again, the formative evaluation cannot address any issues of ‘museum fatigue’. With the exhibition being situated on the far corner of the fourth floor of a large museum, there is a possibility that museum visitors have already experienced several of hours of museum going. Furthermore, they are entering the third section of an exhibition that has dealt with historical information being delivered across a variety of modes, although primarily text based and didactic. The visitor is then expected to ‘wander through a series of audiovisuals’ to create their learning experience.

Both Sarah Morris and Clayton McGregor emphasize that the exhibition is a community show, and that there was a deliberate acknowledgement that repeat visitation was desired.

Although summative evaluation would be required to determine the efficacy of the installation in communicating the intended messages it appears that the installation did not quite achieve the initial vision that the look, feel and ambience of the space would create the kind of environment that might transport the visitor from a museum exhibition, to a comfortable, social space where stories can be shared. This must also
be related to the expectations of the visitor and how those expectations might be primed.

The results of the formative evaluation also prove interesting. They demonstrate some of the issues that are grappled with when determining content and delivery. Some visitors thought that the lack of ancillary information enhanced the experience, whereas another felt that it degraded the experience. The implication is that these differences need to be acknowledged and strong and well-developed concepts and aims need to be developed through collaboration to justify the means of delivery.

This chapter has provided the overview of *Tangata o le Moana* and investigated in more detail the development of the thirds section of the exhibition *New Home: Land of Plenty?* In doing so I have described the environmental language of the space and its impact on me, as a user. Through the participant interviews and archives I have begun to build a picture of the collaborative nature of exhibition development. This has created an experiential environment that has its own language. The following chapter will examine the second interactive case study, *Pacific Beats* using an analysis methodology that follows the same pattern adopted in this chapter.
Chapter 4 Pacific Beats

Introduction

The previous chapter involved a review of the exhibition as an experience. This is important as it describes environmental effects that the design and content has on a visitor to the exhibition. The further data gained through participant interviews and analysis of archival literature indicates whether and why such effects are intentional. Chapter four will focus on the Pacific Beats music interactive. Analysis reveals that the motivations for its development were primarily influenced by a desire to attract new audiences. This was to be achieved through providing a fun and social experience through the use of popular culture.

The final segment of Tangata o le Moana is titled New Zealand, A Pacific Place. The 90% Concept Brief (Te Papa 2007a: 21) states:

In contrast to the previous experience of Segment Three, visitors entering Segment Four will encounter a distinctly colourful and lively exhibition space, reminiscent of a market place full of activity. Here visitors will explore the Pacific Renaissance and celebrate cultural survival by visually rummaging through the New Zealand versions of indigenous Pacific peoples craft. Enormous tivaevae and tapa will provide a breath-taking backdrop to this segment.

Environment

As with chapter three, reporting the effect of the wider environment is important. This places the interactive in context and describes the experiences that have created an emotional or psychological condition in the visitor prior to their immediate use of Pacific Beats.

The space has been designed with a more open and contemporary feel to complement the subject matter. There is more colourful interpretive
media here. The large ‘jumbled’ case Milestones with the two touchscreen interactives is full of a variety of colourful artefacts, from cartoons and book covers to clothing and sporting ephemera. The walls in the gallery have been painted a light colour and this, combined with the high stud of around seven metres, creates an airy and open feeling. The tapa and tivaevae, mounted on the walls above cases that are filled with contemporary and traditional Pacific costumes, create splashes of colour. The large table cases in the centre of the room also contribute to the brighter feel as they are filled with the contemporary Pacific made and influenced art and crafts.

There is one audiovisual display showing short documentary style films focusing on intangible heritage. I am able to view the themes that I am interested in by selecting one of four options. In its rest state, the screen is blank and there is no audio. When the video is playing the volume is quite loud and fills the whole area of the exhibition easily. Sarah Morris noted the issues with sound spill in the gallery and it appears that several competing techniques have been used to try to mitigate this. In New Home: Land of Plenty?, the volume of each of the twelve stations had been carefully set to try to minimize the competing conversations. With this particular audiovisual, the volume seems to have been set loud to drown out any competing sounds, although the overall effect of this is to contribute further to the issue of sound in the gallery. There appears to be an inconsistent strategy in the sound design within the exhibition.

Dominating the space however is the Pacific Beats mixing booth. Two large discs form the ceiling of the booth, one slightly smaller than the other. The effect of this is to create a very modern, almost ‘space-age’ style space. The booth is three sided, with the open side facing out into the central space of the gallery, therefore there is no confusion or doubt as to what the space might contain. The only question for the visitor is what it is that you do in the space. The back wall of the booth is covered in posters from contemporary popular recording artists indicating the theme explored in the booth (see Figure 12). The table itself is a disc
1500 millimeters in diameter and made of white plastic. This, once again, emphasizes the contemporary feel of the booth.

As I approach the mixing table, the graphic user interface (GUI) appears on the table (see Figure 15). The GUI has at its centre a thumbnail style icon of a particular record cover, which identifies an artist and song. There are arrows either side of the icon, inviting me to touch the table. There are no written instructions so it is up to me to experiment and discover how the interactive works. There are clues that provide some guidance. These include the name of the interactive – the mixing booth, the icons identifying songs and artists and also my previous experience.
of touch screen technology which is common both within this exhibition and throughout the museum as a whole.

Te Papa describe *Pacific Beats* as, ‘acting as an attractor in itself, particularly to the elusive youth market, a Pacific Beats Music interactive will enable visitors to combine beats and samples sourced from leading Pacific Islands recording artists both customary and contemporary with traditional and modern instruments such (as) Cook Islands drums and ukuleles’ (Te Papa 2006c: 5). This indicates some of the aims of the interactive that relate to the key message within this segment. There is to be an exploration of how Pacific musicians have utilized trends, sounds and instruments from elsewhere and created their own style, and secondly to attract a particular demographic. In developing this interactive Te Papa overtly state that it is to be created as a tool to attract a particular demographic, the ‘elusive youth’.

Once I have scrolled through the tracks and settled upon one, I place my hand on the ‘select’ icon. Six circles appear on the table. The animated images react to where I place my hands on the table. Colourful patterns follow the movement of my hands – the table is interacting and responding to my movements. When my hand is placed on one of the circles a sample of an instrument from the selected song starts to play. The sample ‘loops’ for as long as I have my hand placed on the circle. Each circle plays a different loop. Dragging my hand closer to the centre of the circle increases the volume, while pushing it away reduces the volume. As a single user, I find it possible to reach three or four of the circles, although the loops stop as soon as I lift my hand from the table. While it is entertaining playing the loops, it is difficult to coordinate more than two loops at once. The interactive requires more than one user to really make it work and allow people to mix the loops to create the song.

The songs themselves are contemporary Pacific styles incorporating modern and traditional instruments, singing and rapping. Mixed genres include soul, reggae, jazz, electronica.
A further limitation is the functionality of the table. With each track having only six short loops available, this very much limits the creativity that the user can exhibit. The functionality is limited to how many loops are played at once and at what volume. It seems that the main purpose of the mixing table is not so much to be creative and mix the tracks your own way, but to have a bit of fun and experience the music and engage with other users. The tracks have been chosen to reflect the popularity of this type of music by selecting some popular artists, for example multi-platinum selling Wellington band *Fat Freddy’s Drop*.

The sounds of the samples create a very upbeat and contemporary feel within the gallery space. It is clear that this is the source of contemporary music that has been becoming more overt as I have moved through the exhibition.

The GUI also contributes to the emotional space. Bright colours, moving circles and colour tracing all react to the movements of my hands, to create an organic experience - one that is both social and personal. This creates the sense that the interactive is designed to be fun rather than to transmit a didactic message.

Sarah Morris, in discussing the role of the interpreter as a visitor advocate, notes that it is important to create fun experiences within exhibitions and that learning might be a by product, but it doesn’t have to be the primary purpose of any given product within an exhibition:

> Interpreters do Visitor Experience Charts, and that experience might be ‘to consider your views’ or it might be ‘to empathise’ or it might be ‘visitors will be chuffed’ or ‘have fun’ or ‘spark a conversation’ and that’s just probably, you know, quite challenging in terms of it being quite emotive, and not that scientifically measurable, really. But I see it as an important part of your leisure experience. And you know, learning is a
fantastic by-product. But also having a chat with Grandad about something is just as valid (Personal communication, 28 August 2009b).

The design of the mixing booth is somewhat determined by the technological requirements of the interactive. The type of interactive is known as a multi-touch tabletop display (see Figure 16). Infrared (IR) light is beamed in a matrix across or through a clear acrylic surface. Above the table an IR camera connected to a computer relays images of the IR matrix to a computer that is programmed to deliver a specific action when the light matrix is scattered at a point, which occurs when someone moves their hand across the tabletop.

Figure 16 Pacific Beats interface

The way the system is developed ‘pursues interaction of four components (human, computer, physical object and displayed objects) (Kim, Park & Lee 2007: 1). In Pacific Beats this interaction can be equated to visitors, computer, table, and music and GUI.
The technology does however have certain requirements when it comes to physical design. The space needs to have a very low level of light for two reasons. Firstly the IR camera needs to be able to read the IR matrix that is beamed across the table. All light contains levels of IR, therefore if there is too much ambient light, or different sources of light, the computer program will have difficulty in accurately reading the matrix across the table. Secondly, the GUI is projected on the table to provide the information and activity for the user. If the ambient light is too great it will affect the brightness, colour rendering and effectiveness of the GUI. The mixing booth needs to be appealing and the colourful movement projected on to the table is a key attractor.

Furthermore, the distinctive ‘space age’ style of the booth is in part determined by how the hardware needs to be placed. As discussed, this segment of the exhibition has been given an open and airy feel to contribute to the sense of an active and contemporary space. The gallery itself has a stud height of approximately 7 metres, however the multi-touch table requires there to be a much shorter distance between the table and the IR camera and the projector. These two pieces of hardware also need to be placed directly above the table to negate unwanted effects such as shadows being cast by users over the table and interfering with both the users experience and the IR matrix.

This combination of requirements has impacted on the physical design, which becomes the main focus in the space, both in terms of size and style. Initially the lack of clarity as to what the booth is for creates a state of curiosity. The overt signifiers as to what it is about are its title, *Pacific Beats*, and the various record sleeves that are mounted on the wall. The scale and darkness of the booth, contrasted with the lightness of the rest of the section creates a threshold.
Collaboration

Function & Purpose

The key message being delivered in this segment is ‘just as international style adopts and adapts Pacific forms (e.g. tatau) so does Pacific Style adopt and adapt international forms (e.g. music)’, while the conceptual / communication objectives include, ‘to explore some of the ways in which Pacific style now extends well beyond the Pacific Island communities’, and ‘To present the Pacific Island and Aotearoa New Zealand relationship as a dynamic, ever-changing one’ (Te Papa 2006c: 5).

Te Papa aims to achieve the successful communication of these messages by creating an interactive mixing table with these proposed outcomes:

- We want visitors to:
  - Have fun
  - Interact with each other
  - Reflect on some of the different ways in which Pacific peoples engage with mainstream NZ culture in the 21st Century, and how the mainstream NZ culture engages with Pacific Island cultures.
  - Reflect upon the sensitive adoption of Pacific motif, materials and practices by non-Pacific practitioners and consider the co-option and globalization of Pacific style and cultures (Te Papa 2006c: 6).

The mode of display is very relaxed, ‘Here visitors may choose to chill out and create their own unique compositions with a Pacific influence, or interact with friends, families or other visitors’ (Te Papa 2006c: 6).

While overtly noting the desire to create an activity that is ‘fun’, the exhibition developers have emphasized this through various decisions. There is a challenge to visitors to work out what the interactive does and how it works. There is no introductory text explaining why the table is
there, and what it is trying to communicate, nor is there any instructive
text detailing the functions and how to operate the mixing table. There is
clear license to experiment. It is envisaged that through experimentation
and discovery, visitors will be impressed and enjoy the experience.

The spatial design of the booth marks the interactive as the most
modern element in this part of the exhibition. While much of this
segment of the exhibition deals with recent and current trends in arts,
culture and sports, the ‘space-age’ design of the mixing booth represents
moving into the future. The colourful and animated GUI acts as an
attractor while the rear wall of the booth is covered in posters of artists,
generally with a high public profile and who have experienced significant
sales and radio airplay in New Zealand.

Furthermore, the mixing booth is one of the final displays in the
exhibition. As the exhibition documents contemporary culture and
ongoing interactions and influence, it is fitting that the final areas of the
exhibition might seem to be looking to the future and exploring themes of
communication and cultural influence.

The target audience and content for the exhibition are defined as

...a cross-generational exhibition, accessible to a broad range
of Te Papa’s visitors. The exhibition content will be engaging
and interesting to adult audiences as well as being accessible
to children, and a range of interpretive solutions will be sought
to communicate key themes in compelling ways (Te Papa,
2007a: 4).

Sarah Morris states that, while there were particular communication
goals to achieve with Pacific Beats, which involve the target audience for
the exhibition, the particular focus with developing the interactive was to
attract young people, whom she describes as ‘elusive youth’.
We call them ‘elusive youth’ because they’re such a tricky demographic to attract and we kind of know that for a number of reasons - we know that young people - from research, see museums as somewhere that families go, and adults go, and usually at that time of their life, they’re really trying to be independent and avoid those two demographics of families and adults – grown-ups and parents, wherever possible.

They are really media savvy and really hard to impress. They are really cynical about adults trying too hard to be ‘cool’. So I’m really interested in trying to find ways to bring them in.

That interest carries on to the museum as a civic space – that you bring things here that are just fun to hang out with, with your friends and do. You might learn something as a by-product. You don’t have to, but you might turn into a museum goer, and there is so much competition with kids leisure time, and money basically, that I think that was my mission with that Pacific Beats mixing table. That was specifically targeted at them  (Personal communication, 28 August 2009b).

Clayton McGregor explains how the design developed in relation to working with this concept of attracting the ‘elusive youth’:

From an interpretive point of view, or a visitor point of view, a lot of the drive for that was to get an audience in that wouldn’t normally come into the space, like teenagers, and I think one of Sarah’s things that was good was a comment – she’d like it to be a place where kids who were wagging school might come in and play around with it - that sort of audience who wouldn’t normally come in. So that was quite a nice way [to describe it]. The nice thing about the way that works is because part of the company that was developing it, Lumen, and ourselves is that we really wanted something where people are forced, well not forced so much, but are encouraged to engage with each other, across that. And it does work that well, but there is a cultural thing, and an age thing that if you get different groups of people there, you kind
of feel like you’re entering into their zone. But we did try to open that up, but the thing is, there is a constraint with how it works, because it has to have certain light levels for it to read the infra-red grid – essentially it’s an infra-red grid, and you’ve got a camera up there which reads where you cross the grid (Personal communication, 28 August 2009a).

The desire to encourage youth is acknowledged in the media brief for *Pacific Beats*, although the overall target audience is also acknowledged as ‘Cross-generational and family groups’ (Te Papa 2006c: 5). This is possibly a more formal acknowledgment that although one of the main purposes of the interactive is for a particular target market (‘youth’) to have a visitor outcome which is not especially specifically learning based (‘Have fun’), there is a need to incorporate both more traditional learning goals and attracting a wider audience to be able to place the interactive in the wider context of the exhibition.

Te Papa’s *Statement of Intent 2006 - 2009* (2006d: 2) endorses the notion of creating experiences that are associated with learning and communication, but emphasise the role of experience and activity. One of its four core intermediate outcomes is: ‘Experience: Diverse audiences, nationally and internationally, gain a greater understanding of New Zealand through access to inspiring, rich, and informed experiences’ (the other three core outcomes being Collections, Knowledge and Community, Incorporating collections, research and engagement with the New Zealand community). The key performance indicator for visitor statistics, however states ‘A demographic profile of visitors broadly reflecting the adult New Zealand population’ would represent success’ (Te Papa 2006d: 2).

The document details strategies for audience development. These strategies highlight the requirements to attract local, regional national and international visitors, and specifically noting the need to continue to attract Māori and ethnic communities (Te Papa 2006d: 18). While there
is a clear emphasis on delivering educational programmes for schools (Te Papa 2006d: 14), there is no specific reference to engaging that ‘elusive youth’ market.

By the Statement of Intent 2009-2012, there is language introduced which indicates an awareness to develop the appeal of the museum with this particular audience in mind: ‘Te Papa’s outcomes have been chosen to enrich the lives of current or future museum audiences and users either directly through provision of experience services or through other outputs’ (Te Papa 2009a: 10). The reference to future audience indicates a desire to develop potential audiences, which may be reflected in Sarah Morris’ notion of turning these ‘elusive youth’ into museum goers by enticing them with an activity which is fun, rather than providing an experience which is overtly about learning.

Furthermore there is a clear shift in the audience profile statements in the two Statement of Intent documents. In 2006, Objective 3.2 Audience states that the while Goal 2 is to, ‘Ensure Te Papa’s audiences reflect New Zealand’s demographic profile’, the Target Level of Performance is that: ‘The demographic profile of adult domestic visitors to Te Papa broadly reflects that of the adult New Zealand population’ (Te Papa 2006d: 34). In 2009 – 2012, the Statement has removed that specification for measures to relate to the adult population, ‘The age, ethnicity and gender profile of domestic visitors is similar to the general population’ (Te Papa 2009a: 17).

In the Annual Report 2006-7, Te Papa consolidates this view by reporting visitor statistics and achievements for the financial year. In its report on its Intermediate Strategic Outcome 3: Experience, demographics are described in terms of location and race, but not age (2007e: 31 - 42).

However, by the 2008-9 Annual report, Te Papa break down the reported visitor statistics into age, gender and race, although the lowest
age limit is 16 years (2009b: 9). One performance measure used to assess the success of the Te Papa Experience is the satisfaction rating for the Our Space development with visitors in the 16-25 years age bracket (Te Papa 2009b: 28). This indicates an acknowledgement that providing a positive experience with this particular market requires attention.

Hence, the Pacific Beats Mixing Booth has been designed not only to deliver content in an engaging way, but also to appeal to a particular target market without alienating a cross-generational demographic.

**Delivery**

The Pacific Beats Mixing Booth holds a significant position in the overall exhibition. Communication goals are to ‘explore some of the ways in which Pacific style now extends well beyond Pacific Island communities’ and ‘to present the Pacific Island and Aotearoa New Zealand relationship as a dynamic and ever changing one’ (Te Papa 2006c: 5). The purpose of the development is to ultimately lead the visitor to ‘Ask themselves and initiate discussion about to what extent is NZ a Pacific place and does it have a role as a repository of Pacific peoples culture?’ (Te Papa 2006c: 6).

Interestingly, the media brief puts forward the intention to incorporate samples of both contemporary recording artists and ‘traditional and modern instruments such as Cook Island drums and ukulele’ (Te Papa 2006c: 5). This element, which would have provided a more overt link from Pacific Island traditional music to contemporary pop music in New Zealand, was dropped from the development. It is possible that developing an element such as this particular proved too difficult from a financial, technical and legal perspective. In order for Lumen Digital and Te Papa to be able to achieve this, the tracks would have had to be re-mixed, incorporating samples or recordings of traditional instruments. Permission would have been required from the artists, and then the
additional work be carried out. Budget or deadline issues may have determined that the inclusion of traditional instruments too difficult to achieve.

Formative evaluation (Te Papa 2007d: 5) reveals that despite the lack of written material to interpret the interactive, and the lack of instruction on how to operate it, Pacific Beats is successful in achieving its stated aims in terms of function, although the focus of the evaluation did not explore the effectiveness of the delivery of the key message. This was due to an inability to evaluate the interactive in the context of the exhibition space, however participants were encouraged to identify the music as a mixture of musical styles (Te Papa 2007d: 6).

The developers requested that the participants in the evaluation be teenagers between the ages of 13 to 18. This indicates the target market being that group of young people referred to as ‘elusive youth’. 13 to 14 year olds participated accompanied by one adult caregiver, therefore a good sample of the targeted groups were selected (Te Papa 2007d: 7).

The evaluation observed and evaluated how participants used the table, how they interacted with each other and how they responded to the music. While the finished product used six tracks, the set up for the evaluation included three tracks which were to be used in the exhibition, and three ‘fillers’ which were techno oriented tracks, ‘not aligned to a Pacific theme’ (Te Papa 2007d: 14).

While most participants recognized that the songs were contemporary New Zealand music with a Pacific theme, in contrast to the fillers, recognition of the music was low, except for the Fat Freddy’s Drop song (Te Papa 2007d: 14-16). While the younger teenagers ‘did not describe the music in terms of style or influence’, they ‘suggested incorporating more musical genres into Pacific Beats’ (Te Papa 2007d: 4). For participants who did make the link, this may have been due to
knowledge of the title of the interactive, *Pacific Beats*, and that it was for an exhibition about Pacific people in New Zealand.

With regards to usability, participants commented that the look of the table and the GUI attracted them to put their hands on it and activate the music. Furthermore, although it took a little bit of time to work out how to operate the mixing table and change tracks, participants reported that this was part of the fun, and did not feel frustrated by the lack of instruction (Te Papa 2007d: 9-12). Group dynamics saw people who knew each other interacting much more than those who did not, although when groups were sent in without knowing each other, they were generally observed trying to coordinate their sounds by the time their ten-minute sessions were up (Te Papa 2007d: 8-9).

Sarah Morris states that getting that interaction between visitors in both figuring out how to use the table, and then to coordinate to create the ‘mix’ was a key objective:

> Some interesting things happened in the development of that. Interpreters are really big on instructions. We have writers here that do all the writing, but the Interpreters write the instructions. I didn’t want an instruction with that, because the target audience, I felt, would have more fun trying to figure it out. They wouldn’t read the instruction anyway – but that was part of it – the interaction was ‘what does this thing do? And trying to figure it out. So it was quite hard to get something out there, which didn't have an instruction by a grown up telling them exactly what we wanted them to do. And it’s very much about that kind of inter-generational interaction. And interaction between strangers (Personal communication, 28 August 2009b).

Overall, however, the way in which users interact at the mixing booth is seen as successful. There is an acknowledgement that not all are comfortable with it, and that there can be a level of reluctance to engage
with it. Sarah Morris believes that this is in part due people coming into museums with the sense that they shouldn’t touch anything:

But having worked on the mechanical interactives for Day One, that whole ‘hands-on’ thing was very new back then, and we had people – parents coming in and telling their kids not to touch – and it was specifically designed to touch! So it’s kind of teaching your audience as you go (Personal communication, 28 August 2009b).

A key objective is to ‘Reflect on some of the different ways in which Pacific peoples engage with mainstream NZ culture in the 21st century, and how the mainstream NZ culture engages with Pacific Island cultures’. Without placing the booth in the exhibition environment, this was difficult to test.

While participants in the formative evaluation were not guided in how to use Pacific Beats, they were aware that they had been brought to Te Papa to test an interactive for an exhibition. This may have created an environment where the participant feels more comfortable with experimentation. Furthermore, test group were allocated ‘teams’ and asked to use the mixing booth with other people. To some extent, they were forced into the situation where engaging with others was more likely.

Although strangers interacting and cooperating on the mixing booth might be a desired outcome, the evaluation suggests that it is more likely to have groups of friends working together (Te Papa 2007d: 9). It also suggests that two to three people using the table is the ‘optimum’ number. It is too difficult for one person to operate more than two

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3 Day One exhibitions at Te Papa are the exhibitions that were developed for the new Museum building, which opened in 1998.
samples, while it becomes too difficult for four or more people to coordinate (Te Papa, 2007d: 9).

Observing users in the gallery suggests that visitors to museums are reluctant to engage socially outside of their own group. On one occasion a group of teenage girls were playing with the table. I approached the table and started to experiment with the sounds and the girls all left. On another occasion I was alone at the table and a young boy approached and joined in. The caregiver of the boy addressed him from across the gallery, asking him to leave it alone and ‘let the man have a go’. While these are just two examples of social behaviour in the gallery, they illustrate the difficulty in placing an interactive in museums with no interpretation or instruction.

These two observations illustrate *Pacific Beats* as a success in engaging its key target market (youth) while less so in its second target market (cross generational). The effect that the interactive has in the gallery is more clearly shown.

The mixing booth itself dominates the space, not only in terms of style and space, but also in sound. With the booth being one of the last displays that is reached, the effect of the sound in the gallery very much brings the environment into the present. The effect of the sound does however also reach beyond the confines of the final segment of the exhibition. It plays a part throughout the whole exhibition experience in collaboration with other elements, although the interactive must be being used for it to make sound.

Clayton McGregor discusses the way in which spaces were created in the exhibition, and how there was an attempt to manage the effects of different spaces:

> I think there’s a level of incidental detail, or incidental things which come into play … but there was a conscious decision
right up front, and a design decision, or a design intention, that every zone have its own unique feel – that when you walk through there you’re walking into another space. From through into segment one to segment two in there, it’s all the red floor and the red walls and you know a lot of people – there was a bit of concern as to what that might feel like, but I think you’ve got to remember people aren’t inhabiting this space, they’re moving through them so part of that intention of those spaces having their own feel to them is then you also have to think about the threshold between the spaces. So there is some intention there, but also incidental. (Personal communication, 28 August 2009a).

Different media has been deployed to appeal to different demographics, and to provide some variety in interpretive styles. This has resulted in an interesting confluence of experiential results.

**Effectiveness**

Clayton discusses ‘incidental detail’ and the ‘threshold between the spaces’. In both instances he is acknowledging that the exhibition environment has been developed in such a way as to encourage liminality. Although the effect of the transitions between sections of the exhibition is deliberate, the other elements affecting visitor’s senses across sections is effectively accidental.

Both Sarah Morris and Clayton McGregor state that the ‘sound-spill’ from different parts of the exhibition caused concern for the project team, believing that it was clumsy and distracting for the visitor. *Pacific Beats*, however, can act as a *lure*. While the source and purpose of the sound is not apparent as visitors move through the exhibition, engaging with the mixing table does help to create an environment of Pacific flavoured contemporary life in New Zealand.
This chapter has described the *Pacific Beats* interactive both as an element in the exhibition and its overall effect and place within the wider exhibition. I investigated why and how it was developed, describing how Te Papa as an organization drives digital media developments and that in the last five years there had been a conscious effort to attract a younger audience to the museum. This has resulted in exhibition teams developing interactives specifically targeted at these demographics. It has described how *Pacific Beats* contributes to all areas of the exhibition through its strong contemporary audio component as well as its striking physical design.

Throughout both this chapter and the previous chapter I explored motivations and practice around digital media development at Te Papa. In the *New Home: Land of Plenty?* installation the impression is that, as a visitor, you engage with these people who tell you their personal stories. This mode of presentation suggests self-representation and therefore Te Papa is engaging with elements of new museology. While the museum engages with the Pacific Island community to develop the exhibition, there is no suggestion in any of the development documents that that community drives this installation. It is produced, edited (and possibly censored) by Te Papa to give visitors an ‘experience about the emotions of Pacific peoples coming to New Zealand to settle in the mid to latter half of the 20th century’ (Te Papa 2006b: 3).

Clayton McGregor acknowledges that the exhibition is designed in discrete sections, and that the thresholds to each have been created to demarcate them. That when you pass through them, ‘you are walking into another space’ (personal communication, August 2009a). He states that there is intention in the physical design to create different spaces to give a different feel, but that there is also stimulus and conditions that are mediated that provide incidental detail.

The exhibition as a whole contains many elements that create liminal experiences. This places visitors within the exhibition, rather than as
external viewers of content. The two digital media installations both exhibit characteristics that promote liminality and they are also innovative in their use as interpretive tools. They involve the users and aid knowledge creation. The impression is that Te Papa is developing its processes to engage on a more democratic level with their community and design exhibitions more holistically. This allows visitors to play a larger role in knowledge creation and reception. This is, however an illusion created by the effect on the environment of the deployment of digital media.

The next chapter will demonstrate how an analysis of the data gathered in these chapters indicates that exhibition development is not dramatically changing from traditional methods despite the impression that the use of digital media is aiding development of progressive exhibitions.
Chapter 5 Discussion

Previous chapters have explored the use of digital media in museum exhibitions with a specific focus on areas of the environmental experience and learning. The Tangata o le Moana exhibition was analysed and assessed to discover why and how digital media was developed for different areas of the exhibition, with a more detailed investigation of two particular interpretive devices, the New Home: Land of Plenty? installation and the Pacific Beats interactive. This discussion will place in context the development of the exhibition and its digital components with current rationales for the inclusion of digital media, and then explore the exhibition as it fits with the wider research on benefits and arguments for the use of digital media. This will be discussed within the three areas of environment, collaboration and delivery.

Initially these three areas were looked at from a very basic level; a museum is a physical and social space - an environment. People with different areas of expertise collaborate to bring to life an idea that will inhabit a space designed to educate and entertain the public. The resulting exhibition is the delivery of that idea.

This discussion will highlight issues around defining the purpose of digital media developments and discuss limitations of the research. It will use the case study data obtained in the previous two chapters and compare it with the data gathered from the literature in Chapter Two. This will lead me to argue that despite many benefits arising from the use of digital media, it is not being used to contribute to new exhibition methodology.

The new museology responds to both a strong cultural shift that includes both political and economic influences. Witcomb (2005: 102) states that ‘The materiality of objects seemed to provide an empirical basis for
nineteenth century ideas of civilization as material progress at the same
time as supporting ideas of authenticity and originality which were
essential to the construction of the notion of tradition’. Russo and
Watkins (2007: 5-6) state that:

[T]he modernist museum constructed environments where
knowledge and education were presented as universal truths.
In the twentieth century, the histories, stories and policies of
the museum were inculcated through the practices of
museum professionals, their curators.

These environments did not manifest themselves in the museum
architecture alone, but also in the development and design of their
exhibitions. Bennett (1995: 96) suggests that the birth of the museum
was concurrent to ‘the emergence of a new set of knowledges –
geology, biology, archaeology, anthropology, history and art history –
each of which, in its museological deployment, arranged objects as parts
of evolutionary sequences (the history of the earth, of life, of man, and of
civilization) which, in their interrelations, formed a totalizing order of
things and peoples that was historicized through and through.’
Museums as a result, Witcomb (2005: 128) suggests, ‘have traditionally
organized their exhibits, with a strong linear narrative which allows space
for only one point of view – that of the curator / institution.’

The changing political, social, economic and cultural nature of society
has seen some museum practitioners respond by questioning their place
within that society. Ross (2004: 85), addresses the needs of society by
stating ‘older narratives of empire, class, race and science are seen by
professionals as inappropriate to the requirements of a pluralistic,
multicultural society’. He believes change has been ushered in by
‘political and economic shifts that have thrust museums into the
marketplace, along with other public institutions – have been decisive in
bringing about a new climate of audience awareness and reflexivity’
(Ross 2004: 100).
This has focused museums on their relationship with their communities, whereby ‘in giving voice to the powerless, a process of self discovery and empowerment will take place in which a curator becomes a facilitator rather than a figure of authority’ (Witcomb 2005: 79). As such museums ‘address interpretations of history from an audience perspective’ (Russo and Watkins 2007: 6). While Hooper-Greenhill, vision of the ‘post-museum’, envisages the decline of the modernist master narratives’ in favour of multiple voices and perspectives (2000: 144-5), the new museology sees exhibitions being developed where communities and cultures are engaged and empowered to represent themselves (Witcomb 2005: 103).

Rationales

Within the museum industry in New Zealand the value of using digital media in museum exhibitions has less to do with creating exhibition experiences that are progressive and visitor focused and more to try to maintain relevancy with a technologically savvy audience. Competition for the leisure time of people, issues around accessibility and using technology to enhance audience engagement are key rationales used when considering the deployment of digital media.

Commercial competition

Informal discussions with museum professionals acknowledged that museums operate within a commercial environment (personal communication, January 2010). Collection, preservation and education remain the primary missions of museums (Museums Aotearoa 2003: 2). However, public perception of any organization is crucial in maintaining positive relationships with funding bodies. Public programmes (including exhibitions) are a key method of maintaining a positive profile in the community. As such, creating a competitive edge within a media-aware commercial environment is extremely important and presenting
exhibitions to a technologically savvy audience requires the use of such media. Sarah Morris acknowledges that teenagers are ‘really hard to impress’, and the Pacific Beats interactive was the response to that challenge (personal communication, 29 August 2009b).

**Accessibility**

Increasing accessibility to people with disabilities and as a cost-effective solution to increasing accessibility to the collections is a major benefit of digital media and one where it is acknowledged that museums can (and must) create exhibits that do cater to different methods of learning.

Clayton McGregor states that there is a tacit understanding that each section of an exhibition will have a certain number of ‘media hits’ (personal communication, 29 August 2009a). There is an organizational acknowledgement at a governance level that this may make exhibitions appeal and be accessible to a broader audience (Te Papa 2009a: 16). It seems however that this has not been communicated more broadly, or officially, to staff. There is little suggestion from either Clayton McGregor or Sarah Morris as to why there is this expectation other than the size and status of Te Papa implies that it holds that role of ‘pushing the boundaries a little bit’ in the culture and heritage industry in New Zealand (personal communication, 29 August 2009a).

**Audience engagement**

Some of Te Papa’s guiding documents, such as the Statement of Intent (Te Papa 2009a: 8-9), and Annual Reports (for example, Te Papa 2009b: 6), focus very much on their desire to be a museum that provides a world leading museum experience, but without specifying what that experience ought to achieve. The Statement of Intent reads ‘enhance audience engagement through the creative application of new technologies’ (Te Papa 2009a: 16). This directive sits within what is still quite a traditional method of developing exhibitions.
Learning

The use of digital media has the ability to encourage and promote learning experiences in museums. Hein (1998) details constructivist learning techniques, while the work of Witcomb (2003), Falk (1999), Falk & Dierking (1995), Rounds (2004) and Griffin (1998) suggests that museum exhibitions should be designed to take advantage of visitor behaviours, which align to constructivist techniques. Furthermore this constructivism allows opportunities for engagement with new museology as described by Ross (2004) and Witcomb (2003).

Environment

Social environment

The museum is a public and social space. Lefebvre’s *Production of Space* discusses social space as a social product (1991: 26). Parry (2007: 88-92) applies Lefebvre’s ideas to the museum highlighting the importance of the ‘visit event’ as being marked by the museum environment as a ‘framed place’ (2005: 92). Visitors to museums are immediately confronted with choices as to how to engage with the space. Exhibition creators need to be proactive in creating spaces that allow and encourage visitors to engage with this on many different levels. Lefebvre states that engaging with space is a means to an end and that it ‘changes life’ (as in ‘society’) (in Parry 2007: 92). Over the history of museums, regardless of whether they were seen as a ‘temple’ or a ‘forum’ they have always been an agent for modifying community attributes, either through education (Cameron 1971, 1995: 48) or politicization (Witcomb 2003: Ch 4).

Emotional responses sought from the exhibition design also tend to follow the narrative. Clayton McGregor talks of wanting to ‘bring people’s
participation down a bit’ as they move into the New Home: Land of Plenty? section, which is an interesting perspective on visitor behaviour (personal communication, 29 August 2009a). It suggests that in moving through the first two segments of the exhibition people have been participating or engaging more with the objects and labels than that which is required with the digital media, and therefore this provides an area of respite. The purposeful and well-designed transitional spaces encourage liminal experiences, although this is largely designed to provide a rest. It is arguable that just because the video installation does not require the visitor to read text, whether that actually has the effect of being more restful.

The work of Lefebvre (1991) and Turner (1968) highlights that the creation of space and utilization of environments, both social and spatial, have the ability to alter perceptions to create knowledge. Parry (2007: 88-92) interprets the Lefebvre’s ‘Production of Space’ for the museum, identifying the museum as an intensely productive space in which the ‘unique, separate, absolute spaces’ of the museum creates a social space where ‘formations of social thought are given physical form in a focused, contained, structured and condensed way’ (Parry 2007: 92). Turner’s examples of liminality in social ritual can be extended to an individual’s experiences in new and unexpected environments (Austin 1999: 35). Parry (2007: 89) suggests that the museum is also an environment that exists as ‘part of the world but at the same time removed from the world’. Applying the idea of liminality to this environment intensifies the power of the museum as a place for knowledge creation. By acknowledging and addressing these influences at the outset of exhibition development, better rationales for interpretive techniques utilizing digital media may become apparent.

Physical environment
Falk & Dierking (1992: 63-66) reveal that museums have an environmental language that influences visitor behaviour. Austin (1999:}
27-8) notes that ‘space perception interweaves physical with mental and imaginative responses’. These can include the architecture and design, and other sensory stimulus. The sum of these observations is that by creating an environment that is exclusive to the one space the exhibition developer is able to cater better to the needs of visitors. An exhibition that has a very distinct environmental design from other exhibitions in the same organization will subsequently allow visitors to take part more effectively in that exhibition. *Tangata o le Moana* has been developed in four sections, with each section having its own distinct design and therefore environmental language. The lighter colours and the mix of artifacts and contemporary artworks, as well as the use of interactives in the first section introduces the visitor to a contemporary styled exhibition tracing the development of the relationships between New Zealand and Pacific Island nations. Section 2, *Pacific Relations*, with its intense red colour, lowered ceiling and density of artifacts speaks of ‘history’, while the focus of section 3, the *New Home: Land of Plenty?* installation creates (or recreates) conversations, albeit one-way, with migrants in the post World War II era. Finally, the exhibition opens out again into a light and vibrant space reflecting contemporary Pacific culture in New Zealand.

**Collaboration**

Digital media output is the result of several different collaborations: both internal and external. The primary collaboration is within Te Papa’s exhibition development team, and secondarily, the team contracts a commercial developer to create the media. A less well-acknowledged collaboration is that which takes place between the organization and the community. This external collaboration involves the response of the museum to the needs its community and audience, and is a relationship that while mediated throughout the organization.
Internal collaboration

The different areas of expertise within the team assess what areas and topics of the storyline (as developed by the concept developer and curator) might lend themselves to different types of interpretation. It is the tensions present within the team – the hierarchy, either real or perceived, within that group of collaborators that ultimately determine how digital media is used. Sarah Morris described having to ‘pick her fights’ when wanting to push through certain ideas and modes of interpretation (personal communication, 29 August 2009b). This in itself is not unusual in a development group who are creatively planning the content of an exhibition, but it also betrays a type of power struggle within that group. Lee (2007: 184) suggests that ‘as educators and designers take a greater role in exhibition development, this contributes to the loosening of control of the curator’ and that the cause of such disputes is often ‘tensions between scholarship and popularization’. The nature of collaboration is that the team members work together towards the same goal, however each team member has a specific task and area of expertise to deliver upon within the project as a whole.

Clayton McGregor recognizes that Te Papa is in a position to push the boundaries of what digital media can achieve in museum exhibitions and feels that the organization is in fact obligated to do so (personal communication, 29 August 2009a). Relationships within seem to stymie part of the creative process due to a tacit yet unspoken acknowledgement that the traditional approach to museum exhibition development takes precedence over notions of using play or activity and interactivity as a key experience in communicating the story. It is the ‘storyline’ of the exhibition that determines whether and how digital media can be incorporated within it. This is further born out from informal interviews I conducted, where the primary foci for having digital media installations were to have a ‘wow factor’ in the exhibition, and to portray the different organisations as ‘up to date’ (personal communication, January 2010).
The initial brief documents tend towards the general in describing visitor experience. If the overall concept briefs were more specific around modes of engagement and how these relate to the *Statement of Intent* documents, then this may create an environment that is more conducive to experimentation and innovation in exhibition development processes, which will flow through to the resulting exhibitions.

**External collaboration – commercial**

In recognizing Te Papa’s obligation to ‘push the boundaries’ Clayton McGregor acknowledges the desirability of involving commercial experts in digital media in the development of museum exhibits. In *Tangata o le Moana* the relationship is a reasonably strict ‘contractor / client’ one. The brief that was provided for tender was extremely explicit, with little room for the developers to experiment or critique the brief.

Both Clayton McGregor and Sarah Morris imply that the tender document was partly shaped through discussions with external providers, and that they were aware of the sort of work that some of these providers were producing (personal communication, 29 August 2009a,b). However, once the exhibition team had approved that brief then the relationship became less of an experimental and creative collaboration than a supply contract.

**External collaboration – community**

While the notion of collaboration in this thesis has focused on internal relationships in developing exhibitions, and in particular developing digital media within exhibitions, there is also the collaboration of the museum with the community that adds a further tension into the creative mix. This, to some degree has been the starting point for the use of digital media in exhibitions. First person interviews help the community tell their story rather than have a museum curator interpret them for the
public. This however has been a conservative application of a new tool. The media has been used as an extension of traditional curatorial methods.

Andrea Witcomb (2003: 79) notes that ‘new museologists’ call for the role of a curator to become more of a facilitator rather than a distiller and distributor of an authoritarian perspective. The idea and process of community consultation is often cited as evidence of this progression from authoritarian to inclusive and the relative affordability of being able to digitally record and playback first person interviews certainly gives some validation to this. Despite this primacy of voice, editing (or censoring) of material, and the context within which it is placed will often see such material being placed in an overarching didactic framework which is still driven from an authoritative perspective.

This thesis suggests that it is not the museum that is driving the change in the increase in use of digital media in exhibitions, but society. The new museology is a response to a demand by society. In earlier times, museums ‘frame(d) objects and audiences to control the viewing process, to suggest a tightly woven narrative of progress, an ‘authentic’ mirror of history, without conflict or contradiction’ (Marstine 2006: 5). M Marstine (2006: 19) interprets Hooper-Greenhill’s (2000) vision of a ‘post-museum’ as one that ‘actively seeks to share power with its communities it serves, including source communities’.

**Delivery**

**Tangata o le Moana**

*Tangata o le Moana* was developed and designed using the approved team approach at Te Papa (personal communication, 29 August 2009b). The team, that included a concept developer, curator, interpreter and spatial and graphic designers, developed themes, storylines and
content. While not specified in policy, there is an expectation that there will be a certain number of ‘media hits’ per section of the exhibition.

Clayton McGregor described how the nature of the content required the design to ensure each section was distinct (personal communication, 29 August 2009a). The design solutions sought by the team in creating such distinct sections has incidentally created an environment that has catered for a wide audience. The entrance to the exhibition is at a site that is close to two other major exhibition entrances. There is an audible sense of random activity from both visitors and the other exhibition environments. As the visitor moves into *Tangata o le Moana*, the sounds become more focused and understandable, exhibition specific. This becomes part of the liminal threshold as the visitor moves from a chaotic environment into an unknown, but more focused environment. The change in aural experience and the change in lighting as the visitor progresses down that first corridor past the vaka create that heightened sense of anticipation.

In the first two sections of the exhibition, the use of the media adds illustration and levels of interpretation to a traditional didactic museum exhibition, where, barring the language barrel and the navigation game, all digital media supports objects with text, audio-visuals and illustrations. The third section (*A New Home: Land of Plenty?*) is a significant shift away from this. Although the way in which the objects are displayed and interpreted might be considered in the style of a narrative museum display, these support the media, not the other way around. The content of the section is still heavily mediated by the museum, however, there is a ‘personality’ to the installation created by the human scaled units that is engaging.

Despite this both Sarah Morris and Clayton McGregor were dissatisfied with elements of the installation (personal communication, 29 August 2009a,b). The idea for this part of the exhibition went through a number of iterations and it seems likely that as ideas were discussed with the
wider development team, and in conjunction with the commercial contractors employed to develop the installation the initial enthusiasm and innovative creativity became distilled. Tensions around some of the ideas led to the delivery system being refined to the point where the information followed the curatorial brief but the method became slightly cumbersome. The installation suffers from the lack of clarity as to how much information exists within it.

When considering visitor behaviour and the use of digital media in exhibitions the available time that a visitor has is also an issue. One potential value digitality has brought to cultural heritage organizations is increased accessibility to collections. Visitors are unsure how long to stay at any one station, meanwhile they are on their feet (and have likely been so for some time) and after a relatively short period fatigue may set in, making the visitor question how long it is ‘worth’ spending at the stations. This is the sort of distraction that does not lend itself to a comfortable environment for learning or leisure!

The fourth section of the exhibition is also the most contemporary and has the most modern and museologically interesting modes of interpretation incorporated into it. It is also the part of the exhibition that is displayed most like an art display, which corresponds with the focus in the area being arts and culture. This section incorporates two aurally loud displays (the audiovisual booth and the Pacific Beats mixing booth) and is directly adjacent to the PlaNet Pasifika Discovery Centre, from which a variety of sounds emanate. Through a combination of design and content, the final part of the exhibition has the greatest sense of activity to it.

Through the use of design techniques and creative content development this exhibition has been developed in a manner that creates different environments and should appeal to a wide demographic with differing expectations and preferences in terms of exhibition styles. That the team
struggled with implementation of some of these ideas is particularly interesting.

Sarah Morris states that sound spill is a major issue in the gallery, and other members of the team stressed that to her (personal communication, 29 August 2009b). She also wished to include activities within the exhibition that are fun. The *Pacific Beats* interactive does have a primary learning objective (to understand the way the Pacific culture and Western culture have interacted in creating contemporary music), but there is an almost apologetic explanation that the main reason the interactive was developed was to appeal to a teenage audience specifically, and that there is not a more formal academic or educational goal to be achieved (personal communication, 29 August 2009b). This demonstrates the current struggle that exists in museums over how to progress and innovate in exhibition creation. The apparently less ‘worthy’ goal of this interactive may in fact give some young visitors a significant and important insight into the roles that different cultures play in our society. As the output method to disseminate that information is not overtly academic in style, and it is difficult to measure whether users of the interactive do indeed come to their own conclusions or make those connections, it makes the interactive itself less valid as an educational tool or interpretive device. It is relegated to something that is a ‘bit of fun’.

While *New Home: Land of Plenty?* offers visitors different first person perspectives on different issues, the entire content of the installation is not easy to determine. The nature of the delivery means that a visitor cannot be sure to have seen all the information that is to be presented. If analyzed alongside Rounds’ (2004) work on curiosity driven behaviour, this becomes one of the strengths of the installation. Visitors are given snippets of topics and have the opportunity to move on or stay within that theme. This allows visitors to ‘graze’. The result is that they will listen to the monologues that catch their attention or arouse their curiosity and in doing so will get a sense of the overall theme of the
installation. Witcomb (2007: 36) suggests that these types of installations are ‘able to engage emotions and in the process produce a different kind of knowledge – one that embodies in a very material way, shared experiences, empathy and memory.’

For this reason the installation can certainly be seen as successful. Sarah Morris (personal communication, 29 August 2009b) describes the issue of sound spill as being distracting, but it is equally likely that the atmosphere that is created in that particular area of the exhibition contributes to the theme in that area and aids visitors in understanding the issues and events. If the combinations of sounds render the viewed recording as unintelligible then that requires mitigating. Having sounds contribute to an overall controlled environmental experience is beneficial.

Sarah Morris (personal communication, 29 August 2009b) acknowledges that people behave like ‘free range chickens’ in museum exhibitions but there seems little acknowledgement of this in the way that the exhibitions are developed. The work of Falk and Dierking (1992: 124 – 125, Falk 1999: 260), suggests most learning in museums has more to do with consolidation and reinforcement of prior knowledge. Hein (1998: 35) reinforces this, noting that constructivist learning relies in part to accessing prior knowledge and that ‘learning can only occur when visitors connect to what they already know’ (Hein 1998: 152).

This is one area where Pacific Beats may in fact be more successful as a learning tool than otherwise predicted. By placing this media in a museum environment, it may be more successful in creating a new awareness than through a more traditional technique. Through utilizing popular music and artists in the interactive the developers are likely to be able to tap into users prior knowledge and have better success at communicating the message. Furthermore, learning can heavily depend on social interaction and in creating a multi user interactive, Te Papa facilitate that group interaction. Again however, there was no tacit undertaking to create a multi-user interactive because it facilitates
learning. It was created as a way for teenagers to be able to 'play' together and have fun in a museum. The perceived pay-off for the museum was if that particular demographic were having fun in what is traditionally considered to be a venue that is not attractive as a leisure venue for teenagers, then that might turn them into museum goers. A key goal for that interactive was to expand Te Papa's market share in that particular demographic. It is hoped that they become more interested in experiencing and learning from a more traditional exhibition experience whether that be at that point in time, or in the future.

The exhibition does cater for a variety of learning styles and this is a purposeful attempt by Te Papa to cater to a broad audience (Sarah Morris, personal communication, 2009b). In doing so the exhibition explores different communication methods as defined by Hein (1998: Ch 2), although the deployment of these methods has little to do with encouraging participation of the audience and communities in a new form of democratic museum culture (Witcomb 2003: 104).

In maintaining the focus of multimedia as an interpretive tool, Witcomb (2007: 36) believes that it is hindering imaginative uses of the technology that can unlock the ‘affective possibilities of objects’. The strength of the technology is in its ability to seek affective responses that are 'more politically effective in achieving alteration of the mind of the citizen than the more traditional use of objects in didactic displays intent on reforming the minds of the citizen' (Witcomb 2007: 46). This is crucial. The use of digital media as affective stimulus is designed to provide better learning conditions. The effectiveness of the installation is mediated by the delivery method. The method of content creation still speaks with the authority of those who created it.

The research suggests that creating social experiences that are fun can be educational. There is equally enough research that shows that museum visitors rarely use exhibitions the way that the exhibition development teams intended them to be used. Labels are rarely read
and the amount of time one person might spend in an exhibition is, on average, shockingly short. This determines that a new approach to exhibition creation is valid.

As such exhibitions need to be designed to cater for the behaviour of the visitors. There are certain expectations around what a museum exhibition should be. Unfortunately those expectations lead to the type of visitor behaviour recorded above. More innovation is required in creating comfortable, experiential environments. This will aid different types of learning through interactions and experiences that fit better with a space that is both social and designed for leisure. Purposefully designing liminal experiences using different media to stimulate different senses is effective in preparing visitors for their exhibition experience. In *Tangata o le Moana*, the well-demarcated sections signal changes in theme and tempo. These threshold spaces that utilize light, sound, colour and design techniques promote curiosity and engagement. While these spaces have been designed to reflect the content, it is the environmental interaction they create that aids engagement. The effect of these liminal environments has mostly been created through accidental design.

**Further Te Papa Developments**

*OurSpace* and *The Mixing Room: stories from young refugees in New Zealand* are two exhibitions developed since *Tangata o le Moana* which take the use of digital media to a level outside that of ancillary material to a traditional exhibition. This in some ways develops concepts explored by *New Home: Land of Plenty?* and *Pacific Beats* further by creating whole exhibitions without ‘objects’ as opposed to interpretive elements within exhibitions. While both exhibitions are very different, *OurSpace* is the first exhibition that has abandoned the primacy of collection items telling a story in favour of uncensored and unedited content provided by users of the exhibition (and the wider community via its website) to try to create a picture of life in New Zealand. These exhibitions also indicate
that Te Papa are developing ideas on how museum’s collect and interpret intangible cultural heritage and engage as a post-museum.

**Summary**

Falk and Dierking (1992: 67-70) found that visitors are drawn to exhibits that are visually compelling, while Rounds (2004) suggests that the personal curiosity of visitors drives how they interact with exhibits. So when visitors seemingly choose at random what to focus on, how can museums tell compelling stories in their exhibitions?

As Wizevich (1993) found, visitors rarely amalgamated the information they absorbed in any one exhibition into a coherent understanding of the overall theme of that exhibit. Witcomb (2005: 130) suggests that museums should create exhibition spaces that are ‘interactive in themselves’. This is the logical continuum that will at once cater to both Falk (1992) and Round’s (2004) theories as to what and why visitors are attracted to different exhibits. By creating visually interesting interactive exhibits and environments that do not necessarily require users to follow a specific path will create better and more rewarding user experiences.

Acknowledging the social nature of museum visits and delivering exhibits and environments that cater to that will go a long way toward this. Digital media has the ability to play a key role in this area. It is an extremely valuable tool in its ability to create discrete environments through the use of sound, light and image. Appealing to senses emotively is as likely to tap into visitor’s prior knowledge as an edict on a well-known historical personality, event or artefact (indeed, possibly more so). Sounds and visuals can be extremely successful in engaging people and creates an environment that people can experience together, compared with a more individual experience of reading a label to oneself.
This however requires a fundamental rethink as to how museum exhibits are developed. Less emphasis on storylines and more emphasis on engaging visitors senses with dynamic environments and providing discussion points through accessing prior knowledge and interactive exhibits may be more successful in creating better experiences for broader demographics.

This chapter has analysed the data collected from the case studies and compared and contrasted it to the data collected in the literature chapter. In doing so, it has traced how the development of Tangata o le Moana, New Home: Land of Plenty? and Pacific Beats has followed traditional development methods but how digital media has allowed design techniques that are more closely aligned with experiential learning become part of the exhibition. Chapter 6 will draw conclusions from this analysis.
Chapter 6 Conclusion

This thesis was motivated by my experience as a museum professional in a regional museum in New Zealand. Conscious of some of the possibilities that digital media could afford, attempts to create innovative installations were thwarted by both a lack of expertise and the lack of a clear concept of what we were trying to achieve. In exploring the *Tangata o le Moana* exhibition I have discovered that these issues are not limited to smaller museums but indicate that practice has not followed theoretical developments in exhibition creation as much as exhibitions at large museums had led me to believe.

This thesis aimed to explore how the development and deployment of digital media in museum exhibitions contributes to new exhibition methodology and development processes in museums.

I argue that the prevalence of digital media developments in exhibitions is not being used as a tool that contributes to new exhibition processes. The inclusion of digital media in exhibitions is creating incidental environmental conditions that suggest that creators of exhibitions are pursuing more holistic and experiential techniques to achieve knowledge creation. A by-product (largely intentional but also at times unintentional) of the use of digital media in exhibitions is that it makes them more accessible and they more successfully appeal to a broader audience. This is due to the variety and familiarity of media that more broadly caters to a variety of learning styles, and more successfully accesses visitors’ prior knowledge.

Through my own practice in a regional museum in New Zealand I expected that exploring the exhibition development process at Te Papa Tongarewa the Museum of New Zealand would reveal that the collaborative process had become more democratic. The authority of
the curator as a subject specialist would neither be questioned nor minimized, but that experts in experience design (whether that would be through digital media design, spatial design or interpretation) would play a stronger role in contributing to content development, and influencing a more open ended and less narrative design in both content and delivery methods.

**The research reveals**

The thesis explored the aim by considering exhibition production into three affective domains; its environment, both physical and social; an investigation into the collaborations that are key in developing exhibitions with a particular focus on the deployment of digital media within exhibitions; and the delivery, *the Tangata o le Moana* exhibition and *New Home: Land of Plenty?* and *Pacific Beats* within it. The research offers three outcomes – one for each domain.

**Environment**

Firstly, the research reveals that in creating interpretive experiences using digital media, exhibition developers rarely consciously use techniques that create liminal experiences.

The literature indicates that liminal environments will create experiences that are more effective in engaging exhibition visitors, or as Victor Turner (in Austin 1999: 35) might suggest, a space “of enchantment [where] anything might, even should, happen….full of potency and potentiality’. Jay Rounds (2004) has suggested that visitor curiosity is a key driver in determining which parts of exhibitions different visitors will focus on, while Karen Wizevich (1993) determined that visitors rarely manage to amalgamate the different sections developed in exhibitions into an understanding of the overall theme.

In the first instance I have established that digital media is not being consciously deployed to create liminal experiences. The literature has explained why liminal experiences can be beneficial to museum visitors
through creating different learning environments that applies learning theories to known visitor behaviours. The research also suggests that in engaging with experts in digital media development to create these more holistic environments, museum practice may progress towards representation of social democracy, or the new museology.

The idea that experience is a key part of learning should see the wide-ranging applications of digital media create in creating environments that will make exhibition visiting a more rewarding endeavour.

**Collaboration**

Secondly, the research shows that the collaborations involved in developing digital media for exhibitions are not as democratic as I envisaged. Elevating the importance of other collaborators such as the specialist designer and the interpreter has not specifically challenged traditional curatorial focused exhibition development, although there is strong movement towards providing a wider range of experiences to appeal to audiences with broader needs. Curatorial objectives based around a traditional narrative technique are seen as the immovable strand within an exhibition from which ancillary experiences can feed. Therefore, the position that the curator holds in an exhibition development team remains the key position of authority. This suggests that a new way of developing more experiential museum exhibitions is still in its infancy at Te Papa. It is the tensions present within the team – the hierarchy, either real or perceived, within that group of collaborators that ultimately determines how digital media is used. The authority the curator retains is key in determining whether digital media in exhibitions assists the creation of experiences that respond better to visitor behaviour. This hinges on the development of exhibitions as interactive environments.
Delivery

Thirdly, the research reveals that while digital media offers significant potential within the exhibition process, it is treated as a discrete entity and its effectiveness is limited. The potential of digital media is that it can challenge and change traditional narrative exhibitions by introducing a new perspective based on experience design.

This is particularly apparent in *Tangata o le Moana*. The exhibition is effective in delivering different styles of interpretation and experiences to cater for a wide demographic. Furthermore, within the exhibition environment there are many encounters that encourage liminal experiences. However, these have largely been created incidentally, and at times apologetically. Karen Wizevich (1993) concludes that the narrative style that accompanies many museum exhibitions, and which Hooper-Greenhill (2000) associates with the modernist museum is largely ineffective as a communication and educational tool. By developing exhibitions from the outset to present content and interpretation more closely aligned with Hein’s (1998) ideas of constructivism, the museum will be able to better engage visitors by creating experiences that complement visitor behaviour. This may provide an avenue for closer collaboration with both external expertise and communities and hence encourage a shift more towards Hooper-Greenhill’s (2000: 144-5) vision of the post-museum, where ‘multiple voices and perspectives’ are presented with equal validity. At present it seems that exhibition concept development starts and ends with a story to be told, primarily through text, with the use of collection objects as ‘illustrations’.

Digital media and interactive development are providing useful tools for exhibition developers in reducing the perceived requirement for museum artifacts and specimens having an accompanying text in order for them to have meaning. Visitors are able to create their own meaning through their experience of these displays, utilising a combination of prior
experience and new experience. Both New Home: Land of Plenty? and Pacific Beats are very good examples. Te Papa has gone a step further and effectively removed tangible artifacts from these exhibits and further progressed that concept through the exhibitions OurSpace and The Mixing Room. These exhibitions allow the museum to focus on their responses to intangible cultural heritage.

**Conclusion**

Based on the three research outcomes, this research concludes that digital media is not being used to contribute new exhibition processes.

The thesis reveals why and how digital media is able to enhance knowledge creation in museum exhibitions. It suggests ways within exhibition development that this can be achieved. While the contributions of collaborators with different expertise are affecting exhibitions, development processes are not markedly shifting towards the post-museum at a rate that the literature suggests.

A narrative exhibition can be seen as the display equivalent of a book or documentary. The ‘real things’ illustrate themes and this becomes the selling point. It’s the only place you can see them. Instead of placing the visitor as the ‘reader’ or ‘viewer’, exhibitions should strive to place the visitor in the position of the ‘author’, where they are placed in a position where discovery and knowledge creation are the primary actions. Multiple perspectives and stories can be aggregated. By creating experiences that place a visitor in a mental or social environment more closely aligned to the themes of the exhibition, this will aid knowledge creation by bringing the visitor into the exhibition as a participant rather than a viewer.
Next Steps

I have looked at the process from the position of a practitioner. To test the conclusion, the audience/user perspective needs to be tested. Perhaps it is time to bring exhibition developers, digital media producers and exhibition users into closer collaboration. This will require a far broader mandate given to all parties to be equal players in exhibition production than is currently afforded under the guise of the focus group.

As museums have aligned themselves more with the leisure industry and organizations such as Te Papa have embraced technology, there must be an expectation of other museums to follow this trend. As such digital media is a key tool, however there is little evidence that exhibit developers have a clear understanding of how this media can be deployed other than as a new way of presenting old material. This is where collaboration is key.

Focusing on the exhibition environment, collaborations with experts in other fields are delivering experiences that are more holistic in their outlook. This results in greater versatility in their ability to allow visitors who have different preferences and interests better access to experiences that they both enjoy and gain insight from.

These issues suggest that it is time for a rethink as to how museum exhibitions are created. Digital media specialists will be instrumental in the teams that create these exhibitions. The idea that experience is a key part of learning should see the wide-ranging applications of digital media create environments that will make exhibition visiting a more rewarding endeavour.
Appendix 1

Participant Information Sheet

Museum Exhibitions in the Digital Age:
Integrating Digital Media in Museum Exhibitions

INFORMATION SHEET

Researcher Introduction:
Neil Phillips
This research is being carried out in order to fulfill requirements for the award of a Master of Philosophy (MPhil) degree in Museum Studies.

Project Description
Digital media is increasingly being used in museum exhibitions. Accessibility, playfulness, attracting different audiences and catering for differing learning styles are some reasons for these developments, but is new media challenging established roles of museum professionals and if so, how?

Developing digital media content requires not only consideration as to how the how the interface and the user interact, but also the content requires a context in the spatial exhibition environment.

A new collaborator is therefore being introduced into exhibition development – that of digital media developer.

The thesis aims to research how collaborative teams comprising members representing different disciplines are determining the use of digital content. Key questions are based around the development of content and style of different digital media projects, and their integration in the physical environment of a museum exhibition.

The increased use of digital media, and the variety of possibilities that can impact on the approach to designing museum exhibitions is also an area to be investigated.
Through exploring these issues it may be possible to explain why and how digital media interactives are being developed in different ways, which participants in exhibition development play key roles and the possibilities for further developments.

*Tangata o le Moana* is an exhibition developed by the Museum of New Zealand Te Papa Tongarewa (Te Papa). The exhibition is installed on Level Four at Te Papa and opened in 2007. It utilizes a large variety of digital media to deliver content and aid interpretation.

An assessment, including a detailed description of the spatial layout, will include discussion as to how the visitor interacts with the content. It will be necessary to describe how the visitor is guided through the exhibition through its layout and content.

Two digital media developments within the exhibition will be assessed in more depth. The placement and interpretive style of each digital media station shall be described and assessed in relation to the concept documents. The assessment shall include, but not be limited to:

- An overview of the purpose of each station.
- A description of how they work and what they present
- The demographic each is aimed at
- An assessment of the type of learning style the interactives engage
- What media techniques are used, e.g. storytelling
- An assessment of how they relate, both in terms of design and content to the immediate physical exhibition environment.
- An assessment of benefits and limitations

Interviews with key participants in the development and integration of digital media in the exhibition will be conducted. The interviews will be conducted separately. The main strand of the questions will be based around how the participants were involved, how the concepts were developed and most importantly how were the relationships developed between the different participants.

**Participant Identification and Recruitment:**
Through informal discussion with Te Papa staff and with reference to exhibition concept documents, three key roles in the exhibition development team have been identified; Interpreter, Designer and Multimedia Developer

**Invitation:**
As a person who was identified as being in a position in the exhibition development team that is considered a key participant in the integration of digital media into the exhibition, I would like to invite you to take part in the research and to contribute by agreeing to be interviewed as outlined above.

**Project Procedures**
You will be asked to take part in a private interview with me. There is the possibility that I may request a follow-up interview. Each interview will take approximately one hour.
**Data Management**

Interviews will be recorded and transcribed. Transcriptions will be offered to you for verification. The recordings and transcriptions will be subject to confidentiality agreements.

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.
- ask for the recorder to be turned off at any time during the interview.

**Contacts**

Student: Neil Phillips
Address
Phone
Email

Supervisor: Susan Abasa,
Programme Coordinator, Museum Studies Programme,
Massey University
Address
Phone
Email

**Ethics**

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University’s Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor Sylvia Rumball, Assistant to the Vice-Chancellor (Research Ethics), telephone 06 350 5249, email humanethics@massey.ac.nz.
Selected Bibliography


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Museum of New Zealand Te Papa Tongarewa (2007b). Segment 3 AV
Garden [Internal Development Document]. Wellington, New Zealand


