



## Cultural Codes: an investigation into the practice of living culture in contemporary Māori art forms within interior space.

Cultural Codes is an exhibition of interior acoustic forms that consider the cultural appropriation of a traditional Maori weaving house (Te Whare Pora). The project explores methods on how to continue and reinterpret indigenous knowledge of Maori culture recognizing that it is an every evolving living culture.

The installation's overall technical application examines how acoustically sound material can be formed and designed to enrich interior spaces. The installation aims to be a freestanding structure. While this installation displays a set parameter due to the size of the exhibition space, it is envisioned that the parameters can be altered

to suit a variety of different interior spaces.

The design process used to create this structure primarily relied on parametric modeling techniques to work out the exact dimensions and angles required to fit all of the components together into the installation.

Lastly to simulate the connection of

traditional values with contemporary practice the exhibition presents a series of photograph and sounds of weaving projected onto the triangle within the installation. This section of the exhibition seeks to link the audience back to traditional practice of Te Whare Pora exploring this both as a physical space and a mindset.

## The Creation of Te Whare Pora

Hine-te-iwaiwa represents the arts pursued by women. Along with this, she is a guardian over childbirth. In the past, all female children were dedicated to her.

## Te Whare Pora

Traditionally, Te Whare Pora was a dedicated place where children were chosen to go to learn the art of Maori weaving [Raranga]. It was more than just a learning environment, it was the place where the child would develop the skills to be worthy of retaining the knowledge passed on to them.

In a contemporary context, Te Whare Pora is more related to a state of mind that a senior weaver is possessed by while weaving. While working within the Te Whare Pora mindset the weaver is considered to carry/ embody the values, skills and knowledge of the weaving discipline, a complex, sacred and revered art-form. Weavers who were initiated into this house had their levels of consciousness raised to be in a state of optimum readiness to receive this sacred knowledge.

Prior to the introduction to Christian beliefs in New Zealand, the native Maori people operated within a spiritual space where natural phenomena were interlinked with the forces of Atua [Maori gods]. These

Hineteiwaiwa also began the important position of ruahine where a woman takes a critical role in the ceremonies lifting the tapu (sacred restriction) from newly-built houses.

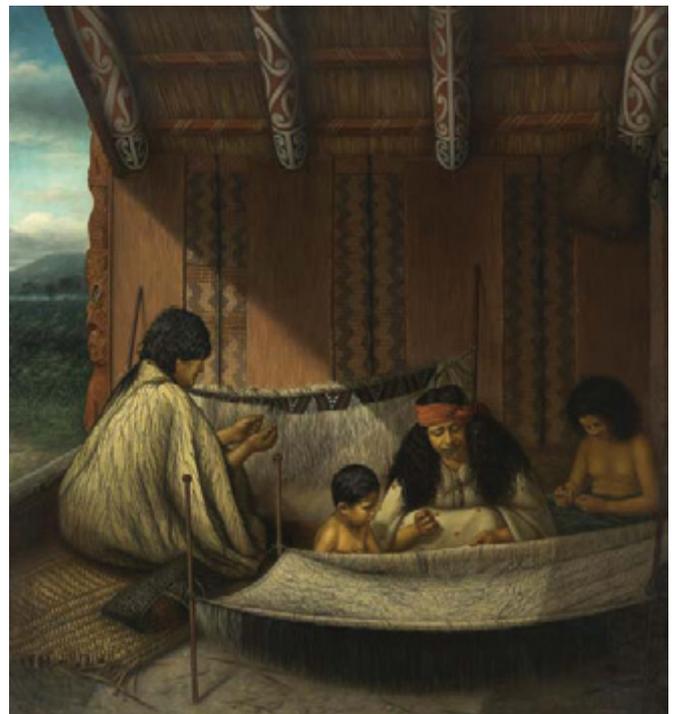
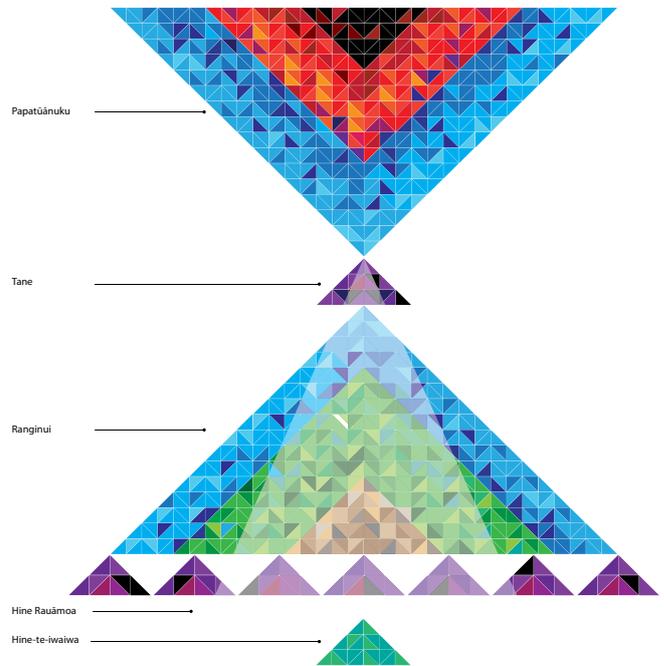
gods had an influence over all aspects of everyday life from cooking and cleaning through to hunting and gathering.

Regardless of having lost a realised place where weaving masters convened, the art form remained important in the lives of those who valued its practices [tikanga].

Since the establishment of NZMACI (New Zealand Maori Arts and Crafts Institute) in Rotorua, the recognition of Maori art and design has been seen on a global scale.

Cultural Codes looks to contribute to the growing practice of contemporary interpretations of traditional Maori weaving. Throughout the development of the Cultural Codes exhibition, a number of sources were reviewed to ensure a culturally sympathetic design that remains true to the origins of the weaving craft.

The structure by the Cultural Codes team has taken Te Whare Pora as a precedent for their project. The design intention behind the exhibition was to re-create



### References:

Tamarapa, Awhina (2011). *Whatu Kakahu; Maori Cloaks*, Te Papa Press, Wellington.

Best, Elsdon (1922). *The Astronomical Knowledge of the Maori, Genuine and Empirical*, Dominion Museum, Wellington.

a contemporary physical form of Te Whare Pora in a contemporary style. The installation is formed to

encapsulate people within a new space and allow for an experience that draws individuals into the mind-

set of Te Whare Pora. The intention of the exhibition is to create a contemporary interpretation of a learning

environment, allowing those who enter the space to experience the essence of what Te Whare Pora is.



## Cultural Coding

The title Culture Codes invokes metaphors that are appropriate to the concept of the exhibition on several levels. On one level Culture Codes alludes to the practice of computer programming, commonly referred to as coding.

On another level the Cultural Codes project alludes to the ways in which Māori people encode culture. Māori people deploy many different cultural craft practices as forms of cultural codes these include: weaving, tattooing, architecture and language. These systems of culture / visual production are means by which different Māori tribes (iwi) has communicated myths of creation, iwi history (genealogy) and propagated values, knowledge and principles of life (tikanga). The symbols, fabrication processes, and unique craft methods used to create artifacts we see within

Māori culture function as an information transmission system linking the past and present.

This linking brings methods of craft from the past in contact with the present. For artists and designers interested in embedding their contemporary craft practices with culture it is important that their approaches remain connected to cultural precedents. The designer must blend the role of traditional design and craft with their own contemporary processes, and modern expressions of culture.

Culturally rich expressions via digital media are fraught with tension arising from the perceived cold nature of the computer and their seeming inability to harness/ imbue the warm aura of humanity. Furthermore the

computer and math's can be assigned to a western culture (pakeha) and rejected as an invention of the other; in conflict with the values and principles of indigenous peoples.

The fields of ethno mathematics and ethno computing offer a counter position in this debate. Ethno math's, and its close relative ethno computing, adopt a social constructivist perspective of math that recognizes the dual influence of math on culture and vice versa. Scholars in this field have used a variety of methods to demonstrate how indigenous knowledge engages with mathematics. This offers youth that are engaged with their ethnic heritage, a cultural connection point to better contextualize their scientific studies.

The Culture Codes installation is a direct

reference to the use of the triangles in weaving craft practice. Although traditional weaving can produce many diverse final forms, the triangular geometry is often utilized in subtle and obvious ways to either guide the construction or as ornamentation of the final garment.

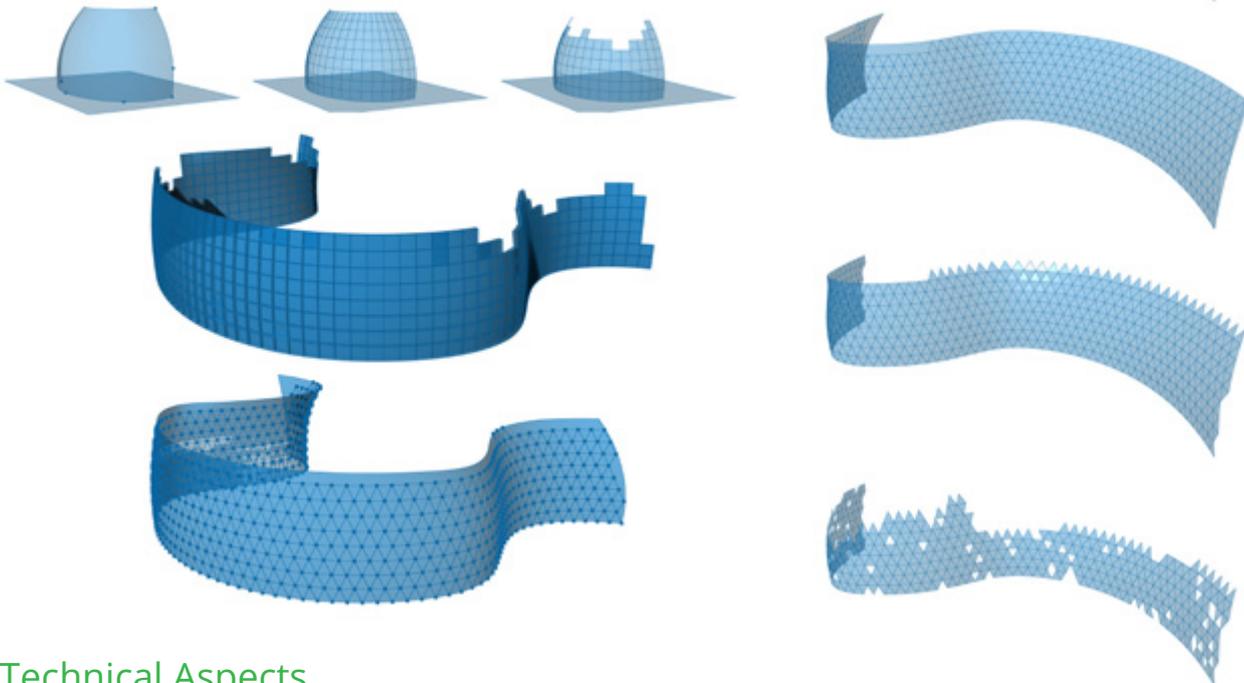
The triangle is a primary geometric shape, used in pattern design across the globe in many diverse cultures. In Cultural Codes design we limited the tile design to equilateral triangles. The curve of the structure prevents us from having a regular tessellation of the surface, however the design is based on the symmetrical properties of equilateral triangles. Equilateral triangles provide a uniform grid to organize visual composition of the projected forms and media.

The digital graphic projection part of the Cultural Codes installation is a culturally specific computational aesthetic work. The goal of the work is two-fold; using digital and computational

techniques to reflect the spirit of Te Whare Pora through photographs and video of weaving. This imagery aims to imbue the physical process of the Māori weaving practice. The projection mapping

is achieved through the use of the triangle as the central geometric shape and uses trigonometric functions to drive the motion of the visuals. In addition, the complex motion effects that

arise from simple, small changes reflect the visual complexity that traditional Māori weavers achieve with through simple modulation of their weaving technique.



## Technical Aspects

In a previous iteration of the Sound Concepts research programme, design research was undertaken to develop a process of adding form while still retaining the acoustic properties of a homogeneous material. The researchers explored the development of visually expressive surfaces that creatively used the properties of an eco-effective PET (polyethylene terephthalate) sheet material. A major strategic direction was to instill sustainability into a plastic building material.

The basic material of the triangle tiles is polyethylene terephthalate

(PET) plastic, the material is industrially needle punched, creating a felt like sheet material with impressive acoustic properties. PET sheet plastic, of which there are several suppliers worldwide, was chosen based on a number of benefits such as: it requires no post finishing – therefore negating the need for painting – although it can be printed with vegetable ink, it provides acoustic insulation, it is an inert VOC (Volatile Organic Compound) and it is lightweight and durable. The tiles are also recyclable and up-cycle friendly and able to be manufactured

from post-industrial PET waste streams.

A recent particular emphasis for the architecture industry has been to produce designs by forming the material to create functional interior products. It is anticipated that this approach will encompass the qualities of the material and use non-contaminating fixings. To solidify this design approach, education is required across the architectural & construction industries to ensure the correct specification and installation of environmentally conscious materials and

not to disregard their positive effects through contamination or miss-specification.

Future development of this research programme particularly in terms of the development of the material for the tiles is to investigate alternative sources of material. These materials should be either recycled or grown in New Zealand and in turn pay homage to our local materials. The use of local materials i.e. fibrous coverings, wood, wool, paper, & flax [harakeke] would add another level of ecological performance whilst building on cultural elements of our industry.



## Craft vs Art

In traditional Māori culture representations of what could be considered art and craft are similar. Craft is seen as the process, the particular skills needed to complete an art form. Craft is commonly seen as the process before completion, art is seen as the creative and imaginative section of the creation process.

Connotations tied to art is that it is tasteful and recognised as holding some sort of value. Art is seen as a completed product that seduces meaning from anyone engaging with it. For the most part craft and art are seen as two separate entities, one a result

from another. It seems as though in mainstream visual culture art is seen as the high-end type of product, craft is seen as the lower 'unfinished' type of work.

In many indigenous cultures, including Māori culture, art and craft operate as one entity. There is no definitive visual distinction between craft and art in Māori objects. Most objects created in the past and present by Māori people follow a distinct craft method but also aesthetically are regarded as forms of art. Good craftsmanship demonstrates an understanding between

the craftsman and the material. The craftsman understands the material properties and tooling required to achieve and evoke certain qualities. The artist understands the contextual basis for the form. Visually explaining why the form is shaped in a certain way and what the artist is trying to explain within that form. There is always a wider intention behind an art form, be it an explanation or statement.

As with craft much of the pieces produced by Māori people bear a function for the everyday or in some cases for special occasions. Most items, wherever they sit in the spectrum,

still bear some form of decoration that plays back into the meaning or function of the object. The spiritual connection that Māori forms hold is where the distinctions between art and craft merge to become indistinguishable. This can be seen through the dissemination of the kakahu (cloak) and many other ancient artifacts. Each of the elements of the kakahu contributes to a wider body of knowledge to help explain connections between the wearer and the living earth. The Cultural Codes project aims to align with these spiritual ideologies.

## Kaupapa

'Ehara taku toa i te toa takitahi, engari he toa takitini' - My achievement is not that of an individual, but is that of many -we can achieve much together.

This project has been a collaborative project between staff and students at Victoria University Wellington, New Zealand.

Each member of the team has brought a unique dimension to the overall design of this installation. A full list of the design

team as well as further information about the exhibition can be found on our website

[soundconcepts.co.nz](http://soundconcepts.co.nz)