global reach
initiative

≈RIVER

POU KAPUA

Google My Business
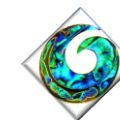Trusted Verifier

Google Street View
✓ trusted

Local Guides

HAKAMANA

TE HA TECH

SENTIO ERGO SUM

WHAOTAPU
Cultural & Creative Solutions

Sharing Cultural Treasures with the World

TE HA TECH Collective
Founding Members & Associates

Pou Kapua Creations
River Digital Agency
Ekarus Studios
Whaotapu Trust
Reality Virtual
Digital Navigators
GRID Pacific
Hakamana

TE HA TECH Collective
Blueprint for Transformation
Prepared by Tania Wolfgramm, Director
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SENTIO ERGO SUM

TE HA TECH
Collective

Sharing Cultural Treasures with the World

What TE HA TECH Collective can do for you…   *…we can bring your dreams to life in Virtual Reality!*

TE HA TECH creates wonderful cultural treasures in reality and virtual reality. These cultural treasures will express stories of your lands, people, histories and legends. We will co-create the best multisensory experiences and technological adventures that will change the way people sense the world; awakening and strengthening their relationships to place, space, humanity and to nature. With a culturally diverse team and holistic outlook, the TE HA TECH Collective comprises agencies, entrepreneurs and technology experts passionate about the innate value of storytelling and immersive experiences.

We combine the latest in digital innovation and world-class Virtual Reality (VR) technology to create incredible 'being there' digital and online experiences and platforms to help shape our age. We have a unique skillset that integrates cultural identity, VR integration, digital innovation, and brand strategy, to create beautiful, bespoke, meaningful VR and digital experiences. To achieve this, we have streamlined the process of entity, asset, object, art, and environmental capture (built and natural), delivering ultra-realistic real-time central graphics (CG) experiences, combined with the ability to create a range of online experiences. Our photogrammetry to virtual reality pipeline has been perfected into an art. We are effectively encapsulating reality in all its visual nuance, creating nothing short of a 'being there' sensation for real-time VR applications. This process is a godsend for digital storytelling, visual effects (VFX) cinematography productions, innovative viral marketing strategies and end-user experiences alike.

I Am Matakerepo

**I am blind
Yet I can see all
I am from the past
Yet I can gift you
a glimpse of
the future**

Combined with our experience and expertise for digital storytelling, we can create incredible user experiences using digital innovation and online development – whether through customised websites that incorporate VR, video and imagery, login platforms, multilingual elements and more…

Collectively we have decades of experience across multiple capabilities including design; data science and analytics; technological and platform design and development; immersive (Virtual / Augmented / Mixed Reality) experience technologies; media production and product development, with great process methodologies to bring your vision to fruition.

HAKAMANA sparks these within you …

HA - *your breath of life that connects all living things*

KA - *your fire and energy to transform*

MA - *your light and presence of being*

NA - *your relationships and connections*

HAKA - *your fire dance of life and energy*

MANA - *your leadership and strength*

HAKAMANA - *creative process to realise your dreams*

GLOBAL REACH INITIATIVE & DEVELOPMENT | GRID PACIFIC

TE HA TECH and the Global Reach Initiative & Development (GRID Pacific) Team, in collaboration with our global partner tech giant Google Earth and Street View, aim to transform Pacific countries into 21st century powerhouses. With the latest technologies from Google Street View, we will capture panoramic high-resolution imagery, accurate 3D depth information, and GPS and GIS location data that is processed, interfaced with Google Maps as web and mobile applications, and displayed in Google Earth.

The Global Reach Initiative & Development (GRID) Programme 'whole of country' solutions support the vision of a more progressive and future focused Pacific, whilst staying grounded in strong cultural legacies, traditions, worldviews, and knowledge systems. The people of the Pacific will be proud to showcase their wonderful countries to the world, while building resilient infrastructure and supporting technological systems that will help them to achieve great outcomes in socio-cultural, spiritual, and environmental health, wealth, and wellbeing.

The GRID Pacific team will capture panoramic high-resolution imagery, accurate 3D depth information, and GPS and GIS location of Pacific countries in the next three years. The data is then processed, reviewed, interfaced with Google Maps as web and mobile applications, and displayed in Google Earth. In addition to Street View, the GRID Pacific Team can provide state-of-the-art 360-degree video, drone, augmented and virtual reality technologies to bring the benefits of global reach to the Pacific.

Improved 3D mapping tools and imagery will also contribute to enabling better business environments in the Pacific region; more collaboration with Pacific diaspora; assisting the public service with data analysis and management; and opening opportunities for education and tourism. It will provide comprehensive data and imagery for research and development, and support ministries and agencies with climate change management and disaster response and resilience.

Tonga and the Cook Islands will be the first countries in the Pacific to participate in the Global Reach Initiative and Development (GRID) 'whole of country' programme.

The GRID Tonga Street View Project supports the Tonga National Vision

"A More Progressive Tonga and higher quality of life for all."

The GRID Cook Islands Street View Project supports the Cook Islands National Vision

"To enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment".

GRID Pacific Contributes to Great Results

- Comprehensive maps and 3D street imagery accessible in Google Earth
- Globally recognized street addresses
- Accurate GPS and GIS geospatial data (longitude & latitude)
- Family and friends can connect virtually from anywhere in the world
- Excellence navigation and directions capability (including landmarks)
- Improved environmental and disaster planning and response
- Mapping facilities and systems (e.g. hospitals, powerlines)
- Increased capability with technology training and business development
- Increased business opportunities with global market reach
- Authentic stories and local knowledge shared on global platforms
- Increased real and virtual tourism revenue through creating excellent cultural tourism experiences in augmented and virtual reality
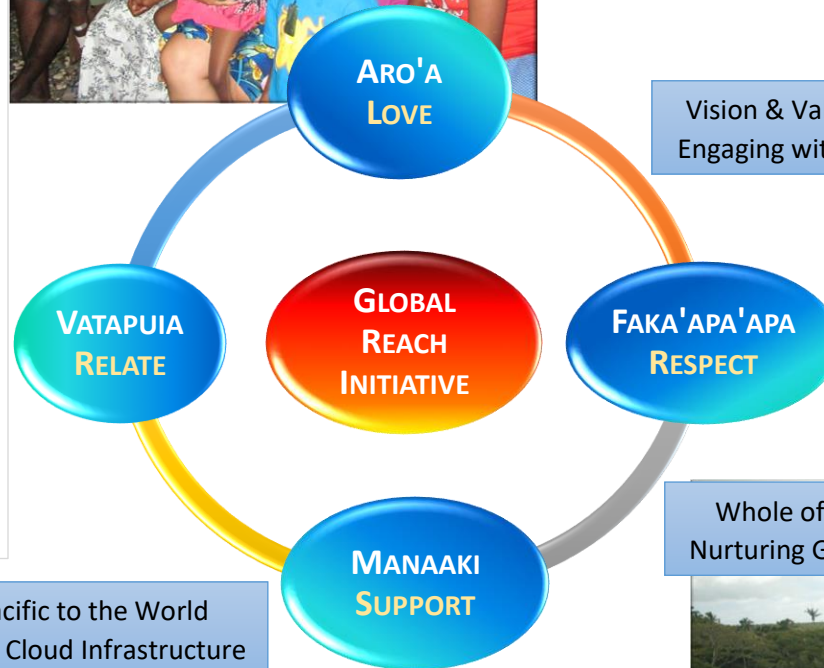
GLOBAL REACH INITIATIVE – VALUES BASED APPROACH

global reach initiative

Reciprocal Relationships Enhancing People, Space, Place

Vision & Values – Spirit of Pacific Engaging with Care & Compassion

Whole of Country Solutions Nurturing Genuine Partnerships

Showcasing Pacific to the World Secure & Reliable Cloud Infrastructure

ARO'A LOVE

VATAPUIA RELATE

GLOBAL REACH INITIATIVE

FAKA'APA'APA RESPECT

MANAAKI SUPPORT

GLOBAL REACH INITIATIVE | GRID PACIFIC – WORKFLOW & LINKS

GRID LINKS TO GOOGLE SYSTEM including

Google Earth - digital version of planet earth

Google Maps - web mapping service

Google Street View - 3D panoramic view

Google Voyager - showcase interactive tours

Google Search - most used web search engine

Google Chrome - freeware web browser

YouTube – most used video-sharing website

Gmail - free email service

Calendar - free calendar & events management

Android – mobile operating system

1. Plan

5. Publish

2. Capture

4. Review

3. Process

Your security comes first in everything we do.

Google services including Search, Maps, Street View, and YouTube are protected by one of the world's most advanced security infrastructures.

TE HA TECH can showcase how our process of reality capture photogrammetry to virtual reality pipeline has been perfected into an art. We share the results - incredible 'being there' VR experiences!

What makes TE HA TECH unique and remarkable?

TE HA TECH creates wonderful cultural treasures in virtual reality. These VR treasures will express stories of your culture, lands, people, histories and legends. We co-create the best multisensory true VR experiences and technological adventures that will change the way people sense the world; awakening and strengthening their relationships to place, space, humanity and to nature. With a culturally diverse team the TE HA TECH Collective comprises agencies, entrepreneurs and technology experts passionate about the innate value of storytelling and immersive experiences.

How will TE HA TECH stand out?

The quality of our VR Experiences is amazing. The photogrammetry and volumetric scanning, combined with our VR technology pipeline has led to the creation of incredible VR experiences. We can put users on the tip of Auckland's Sky Tower - at 328 metres it is about the same height as the Eiffel Tower! The sensation of stepping out into the air - of flying - is breath-taking. We will also share the Pou Kapua VR Experience of the largest Māori Pacific totem in the world. Pou Kapua is a symbol of Māori / Pacific / Indigenous cultural identity and creatively depicts enthralling stories of ancestral journeys, fascinating legends and stories.

TE HA TECH – We support Cultural Conservation

Many of the world's cultural and natural heritage sites are under threat from both people and environment. For example, the rise of global tourism now strains the infrastructure of nations, cities, and local communities who are trying to both promote heritage sites yet also preserve them. Security issues are also increasing in many of our cities. Many guardians of these wonderful and often sacred places are limiting access to them, in an effort to conserve their wonder. Many of these cultural and natural treasures, some built by people, others by nature may not be available for people to see and experience, and TE HA TECH's dream is to bring the stories, histories, and legends of these incredible treasures to life in virtual reality.

Collectively we have decades of experience and expertise across multiple capabilities including design; data science and analytics; technological and platform design and development; immersive (Virtual / Augmented / Mixed Reality) experience technologies; digital storytelling, media production and product development, and platform development. We combine the latest in digital innovation and world-class VR technology to create incredible 'being there' digital and online experiences that can help to shape our age – and the hearts of minds of generations to come.
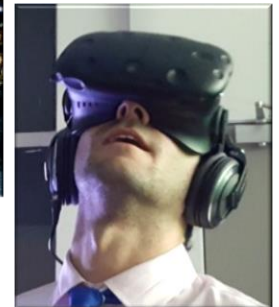
TE HA TECH can share some its VR experiences including Pou Kapua VR which puts users directly in touch with the largest Maori / Pacific Totem in the Pacific - placed in VR on a beautiful beach in New Zealand. The quality of the VR production is incredible. We can also showcase our VR experience that puts you at the top of Auckland's Sky Tower - not for those afraid of heights! And we have others of beautiful heritage buildings and more. We will also showcase our volumetric capture and other elements of our VR technology pipeline. This will give visitors a flavour of how wonderful VR experiences of their *own* countries will allow people from all over the world to feel and sense many aspect of their culture, people, places, natural and created treasures - even from the comfort of their lounge! This may trigger a desire in many VR visitors to want to see them in person - and millions will certainly want to share their experience with others.

Importantly, our TE HA TECH Approach ensures that we work respectfully with you at all times, whereby everyone is treated with honour and dignity, and that we work together to protect all elements of the process, bringing your vision to life in the best way possible.
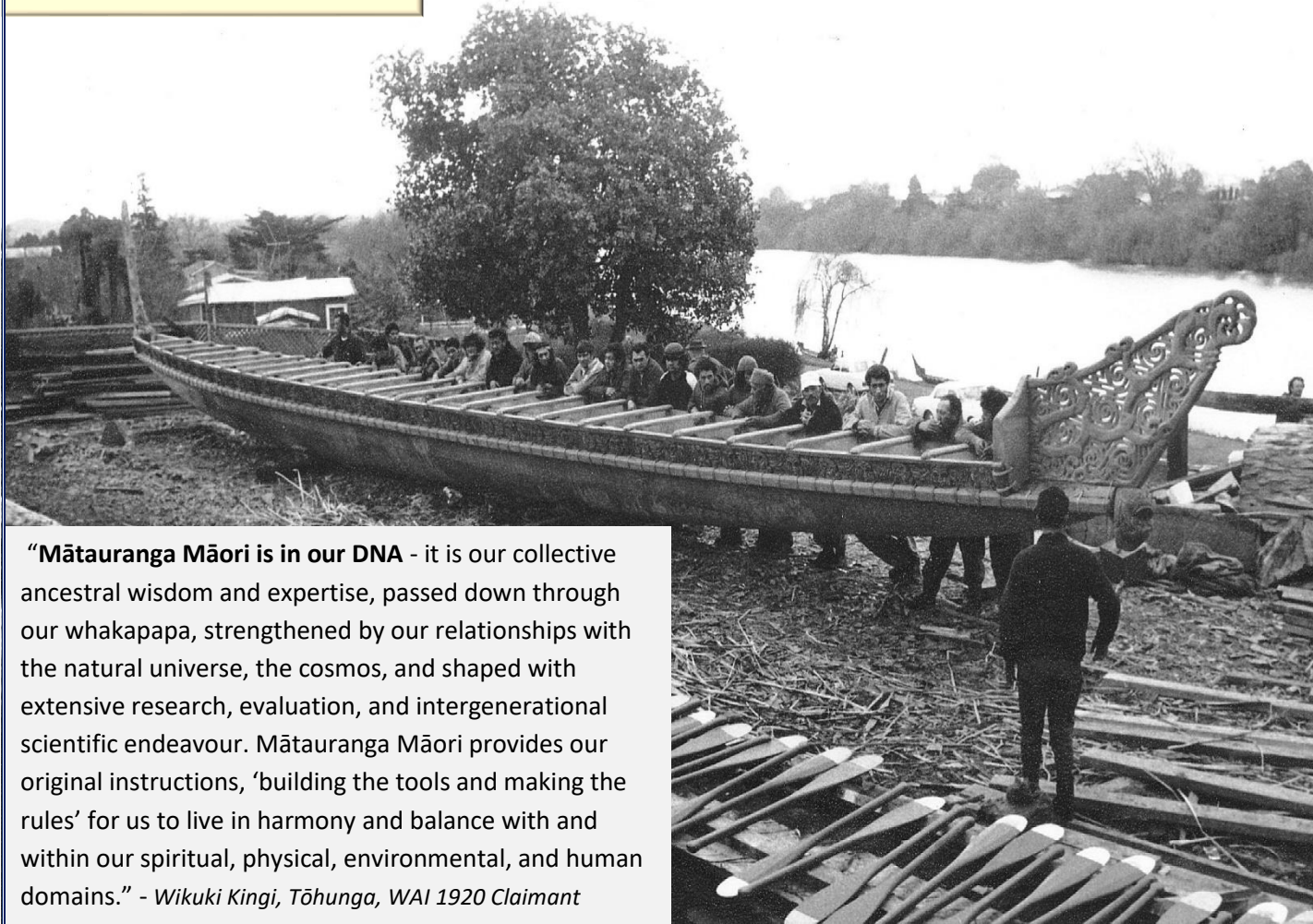
TE HA TECH COLLECTIVE
OUR ETHOS & APPROACH

SENTIO ERGO SUM

DREAM

Vision / Value
Spirit of Culture / Identity
Commitment / Touchstones

Celebrate / Share
Exceptional Presence
Generous Sharing

LOVE

DO

Relate / Create
Authentic Engagement
Collaborative Design

OWN

LIVE

Experience / Captivate
Excellent Benefits
Transformative Outcomes

Activate / Generate
Innovative Solutions
Exceptional Products

Blueprint for Transformation © TE

Mātauranga Māori

"**Mātauranga Māori is in our DNA** - it is our collective ancestral wisdom and expertise, passed down through our whakapapa, strengthened by our relationships with the natural universe, the cosmos, and shaped with extensive research, evaluation, and intergenerational scientific endeavour. Mātauranga Māori provides our original instructions, 'building the tools and making the rules' for us to live in harmony and balance with and within our spiritual, physical, environmental, and human domains." - *Wikuki Kingi, Tōhunga, WAI 1920 Claimant*

Mātauranga Māori underpins the creation of all Māori taonga and technologies including Waka such as this Tainui canoe (at left). This involves extensive collaborative Tōhunga-led research, intergenerational science and innovation.

"While there are many definitions of Mātauranga Māori, the essence of the meanings can be found in the kupu (words) themselves. 'Mātauranga' includes many scientific elements including, inter alia, 'ma' (relational components; presence of all light -> physics); 'ta' (belong to; to cause an *effect*; to apply -> methodology); 'mata' (vision; potential energy -> medical sciences; biology; biopsychology); 'mātau' (to know, to understand -> scientific research); 'tau' (number -> mathematics); 'u' (growth -> scientific outcomes); ra (light; heat -> thermodynamics); 'taura' (bind together -> analysis, synthesis); 'nga' (plurality -> scientific pluralism); and 'ranga' (weave together -> transdisciplinarity)." - *Tania Haerekiterā Wolfgramm & Wikuki Kingi*
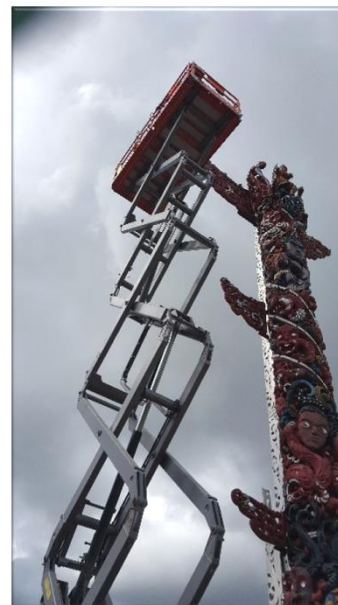
Mātauranga Māori in Action … in Multiple Realities

**Pou Kapua, the largest Māori / Pacific Pou / Totem in the World
Moving from collective Moemoeā / Dream to 2D, 3D, 360 XP, AR, VR
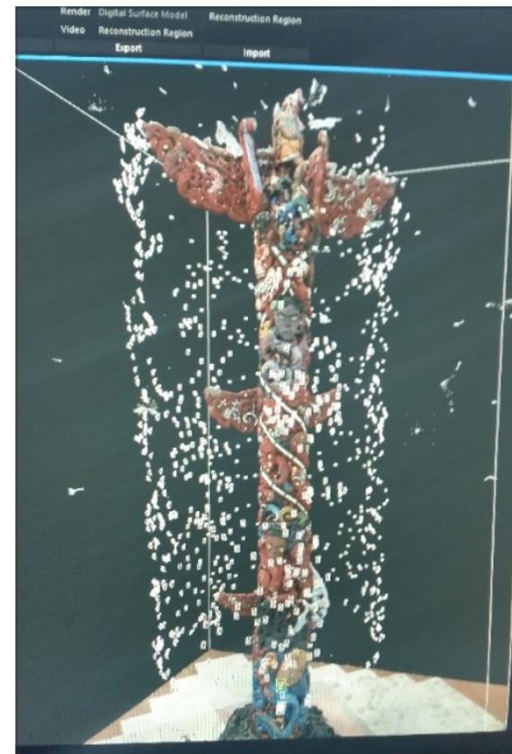and Te Reo / Language XP on Global Tech Platform**

Pou Kapua – original 2D sketch (above); 80 ft high - created, carved and standing in Manukau NZ (right)
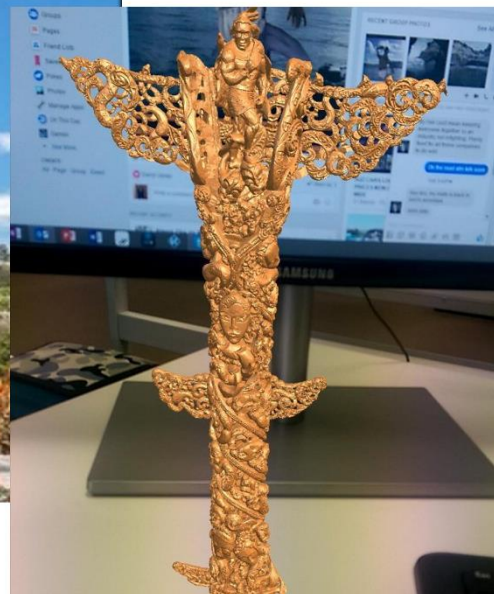
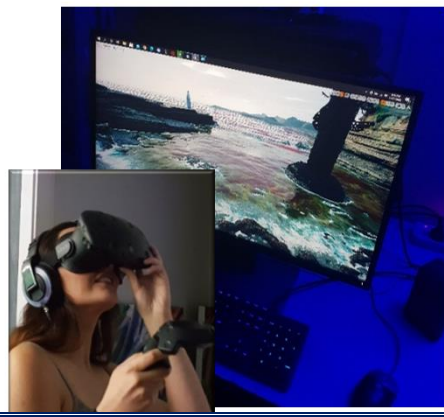**Pou Kapua** – data collection (above); point cloud for VR XP (right); Augmented Reality AR XP (below)

Pou Kapua – Te Reo Māori XP in Google Earth Indigenous Languages Layer (below)
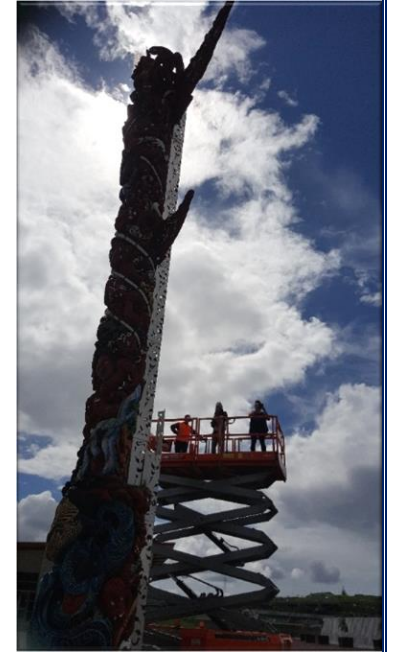
Pou Kapua – Incredible Virtual Reality Experience VR XP (left)
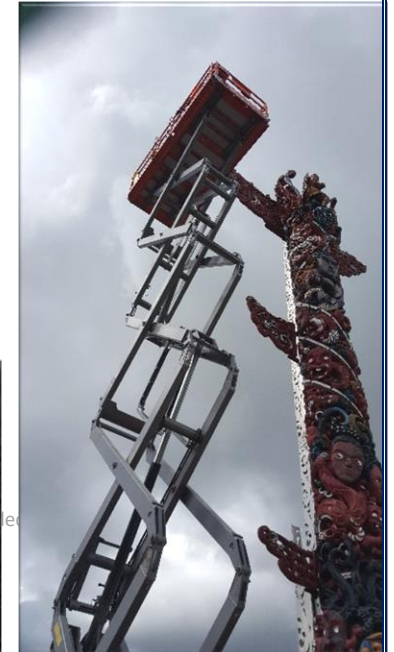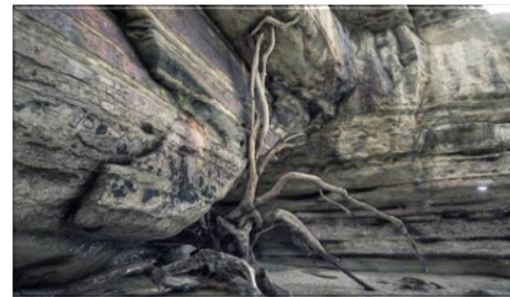
SENTIO ERGO SUM

TE HA TECH CHALLENGE
Moving the Reality
of Pou Kapua into Virtual Reality

15000 incredible images

multiple locations

thousands of hours

trail-blazing technologies

countless sleepless nights …

… and **Pou Kapua** is reborn

in the Virtual World

Dream … Do … Live …

SENTIO ERGO SUM

Using state of the art 3.5D video and photogrammetry techniques we create experiences that transcends photorealism into a sense of truly 'being there'

Live …Own … Love …
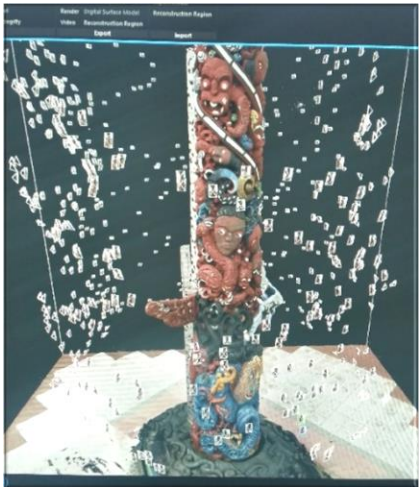
I AM POU KAPUA

Conceived in time immemorial by my parents

Ranginui – Sky Father

Papatuanuku – Earth Mother

I grasp in my hand the Baskets of Sacred Knowledge

Ancestral Knowledge, Life Knowledge

The Baskets I entrust to you

To learn, to know, to share

To live in harmony with nature

Blueprint for Transformation © TE HA TECH Collecti

To live in peace with each other

People of the four winds, near and far

You start your journey by invitation. The karanga / call to the wharenui / traditional Maori meeting house touches your spirit. You visit magnificent Pou Kapua, teleporting to the top to greet Maui. You stroll through sumptuous galleries, laden with amazing art offerings. Then you stop at a beautiful beach, water laps at your feet. You rest a little at an inspiring cathedral, before you move on to Sky Tower. The heights are dizzying. You are on a chair at the very top of the spire. You step off – into air! You are simultaneously terrified and exhilarated as you fly! The views across Auckland City are breath-taking. **You love it! You want more ...**

© TE HA TEC

Cultural Content Opportunities

Sharing our stories of Aotearoa with the World

Bringing Lessons to Life

Go diving at a beautiful reef in the islands - reach out and touch it!

Being on the GRID is a Game-Changer in Education

"Imagine exploring the coral reefs of the Pacific … With global platforms such as Google Expeditions, teachers can take students on immersive, virtual journeys."

Taking Field Trips to Aotearoa

Take a field trip to the blowholes – you can almost feel the spray!

Cultural Taonga & Arts Opportunities

global reach initiative

Being on the GRID is a Game-Changer in Tourism

"Teleport to new worlds and have incredible adventures with your family and friends." – Wikuki Kingi, TE HA TECH Collective

ENJOY AOTEAROA IN THE REAL WORLD

Boost Pacific Tourism and enhance high-value tourism experiences

"go there before you get there"
- Tania Wolfgramm, Global Reach Initiative

ENJOY AOTEAROA IN THE VIRTUAL WORLD

Create incredible virtual immersive experiences for the global marketplace
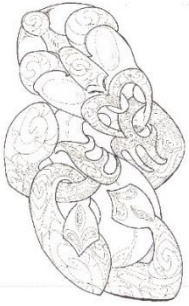
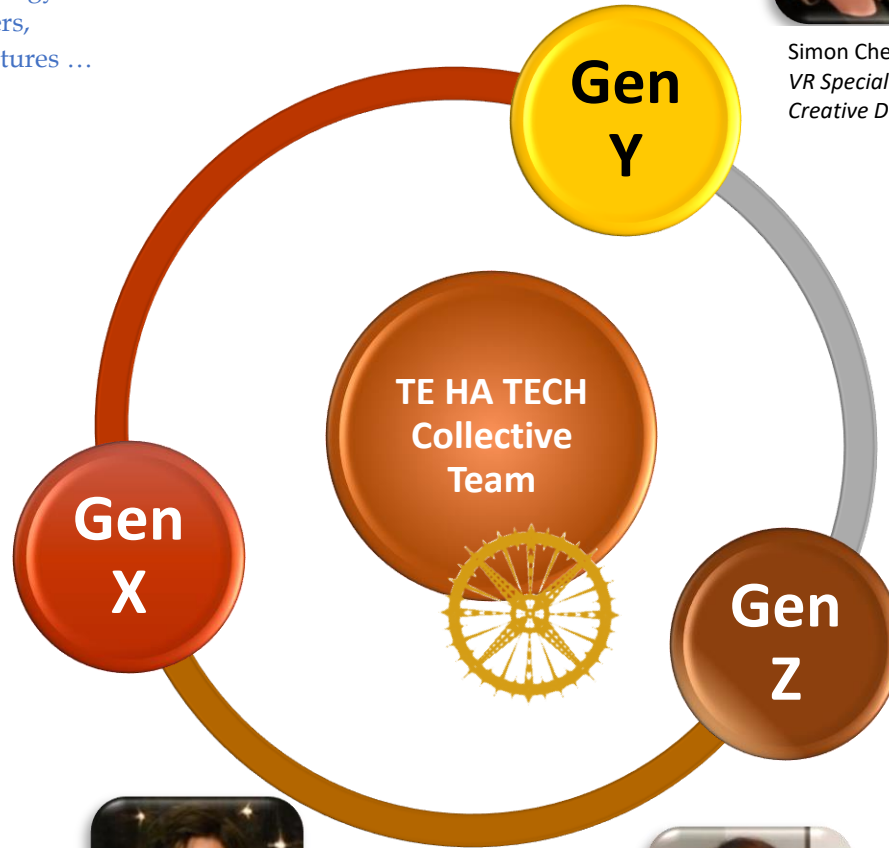*"the ultimate in sustainable arts"* – TE HA TECH Collective

See where whales are born – and swim with them!

E HA TE

Nurtured with ancestral wisdom,
we are shapeshifters in the cyberflux,
tricksters of technology,
poets, storytellers,
co-creators of new futures …

Gen Y

Gen X

Gen Z

TE HA TECH Collective Team

Simon Che De Boer
VR Specialist
Creative Director

Isaac Rolfe
Computer Scientist
Software, Platforms

Rainui Teihotua
Design Specialist
Digital Narration
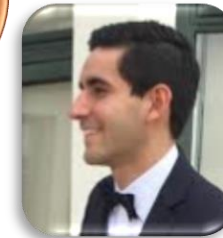
Vincent Wolfgramm
Mathematician, Quantum
Physics, Algorithmist
Game Developer

Wikuki Kingi
Cultural Symbologist
Designer, Technologist

Tania Wolfgramm
Executive Director
Systems Sculptor

Moka Apiti
GIS Specialist/ UAV
Geospatial Mapping

Dr Rachel Wolfgramm
Specialist - International
Business & Sustainability

Ashlin Rolfe
Creative Writer
Pharmacology

Luke Page
Animation, Gaming
Linguistics, Media

Darcy Russell
Social Media Design,
Project Administration
Arts Conservator

TE HA TECH Alliances & Associations
o   NZ VRARA, NZGDA
o   TE HA Alliance
o   Native Science Academy
o   Data Sovereignty Network
o   The Cultural Conservancy
o   Indigenous Education Institute
o   Auckland University of Technology (AUT)
o   University of Auckland (UoA) School of Business
Global Alliances in the Virtual Reality / AR / MR Arena
Local Tribes / Communities across NZ / Pacific / Globe

SENTIO ERGO SUM

We co-create the best multisensory digital and VR experiences that can change the way people sense the world - awakening and strengthening their relationships to humanity and to nature … with a spot of shopping on the way!

DESIGN

- Research design, develop, implement
- Full spectrum design methodologies
- VR / Immersive experience design
- Cultural / creative storytelling
- Cross-platform content strategy
- Data visualisation / motion / gaming
- Experience logic

BIZ

- Business & digital strategy
- Product development pipeline
- Interactive services
- Prototyping / proof of concept
- UX, UI, User Research / Analysis
- Digital productisation & monetisation
- Web / Online applications; Streaming
- Dissemination; distribution

TECH
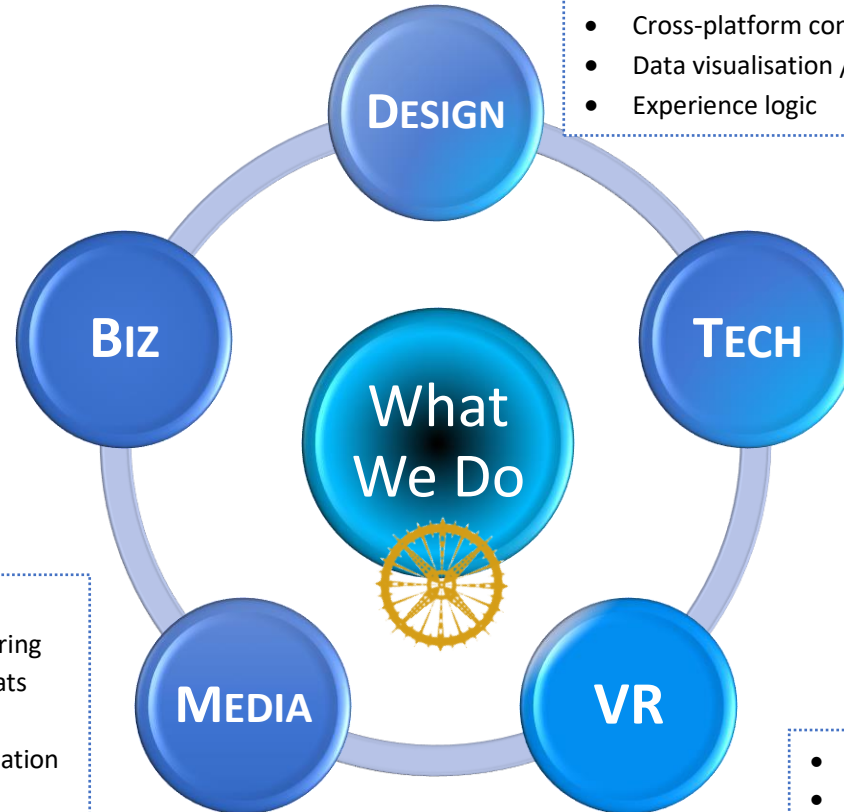
- Computer / data science and analytics
- Data capture, management, integration
- Digital platforms and framework
- VR Pipeline production technology
- Geo-location; Street View, SEO and SEM
- Hardware / software development
- Solutions Architecture
- Artificial Intelligence
- DevOps; API development
- Front-end / Back-end / Full-stack Dev

What We Do

MEDIA

- Videography; animation
- Visual and sound engineering
- Scalable to multiple formats
- 360 video production
- Projection mapping; animation
- Editing; post-production
- Performance Measurement
- Optimisation

VR

- Virtual / Augmented / Mixed Reality
- 4D Photogrammetry / VFX cinematography
- 3.5D in-motion volumetric capture
- Robotics & Autonomous Operations
- UAV and Drone cinematography
- Tangible & fiducial marker response systems
- CG; GreenScreen; Voice Over integration
- Motion & gesture responsive systems
- Billions+ dense point cloud data scanning
- Signal Processing; Deep Learning

Blueprint fo

TE HA TECH Collective

Integrating VR and digital innovation to create immersive experiences and platforms

CAPABILITY: MĀTAURANGA MĀORI

Created and carved by our team of over 35 Tohunga / Master Carvers and international Indigenous artists from around Aotearoa New Zealand, the Pacific Islands of Tonga, Samoa, Cook Islands, Tahiti, Hawaii, Kanak (New Caledonia), Rapanui (Easter Island) and Indigenous peoples of the nations of Australia, Alaska, Canada, and America, Pou Kapua creatively depicts enthralling stories of creations, beginnings, sacred places, people and legends.

Standing as kaitiaki / guardians on each side of **Pou Kapua** are two imposing three-tonne moai, carved by expert sculptors from Rapanui / Easter Island. At the base of **Pou Kapua** stands mighty Tangaroa, the Guardian of the Ocean. Above him are Ranginui (Sky Father) and Papatuanuku (Earth Mother). Throughout **Pou Kapua** are many guardians, including Tane (Forest), Tawhirimatea (Winds), Tumatauenga (War), Ruaumoko (Volcanoes), and Rongo (Peace). We have stories of 'ohana', the taro providing the roots of family for the people of Hawaii; stories of Kanak of New Caledonia; Aboriginal dreamtime, Tlingit killer whales, and Cree warriors to name a few.

Threaded throughout **Pou Kapua** are the journeys and adventures of our ancestors, with Kupe at the top; fascinating legends and absorbing histories of our migrations throughout the magnificent Pacific Ocean.
A spiritual rope of unity binds tribes and people together.

As defined by the Waitangi Tribunal, **Pou Kapua is a taonga**, "that is in its entirety an expression of Mātauranga Māori." Pou Kapua relates to and "invokes ancestral connections (whakapapa) and contains or reflects traditional narratives or stories" that have been passed to us by our Tohunga Toi Ake, Kaumatua, and traditional knowledge holders. Pou Kapua "is a taonga that possesses mauri and has living kaitiaki in accordance with tikanga Māori."

The stories and concepts are developed by Pou Kapua Creations and the intellectual property developed through this project belongs to Pou Kapua Creations Trust the owner and perpetual kaitiaki of Pou Kapua.

*"**Mātauranga Māori is in our DNA** - it is our collective ancestral wisdom and expertise, passed down through our whakapapa, strengthened by our relationships with the natural universe, the cosmos, and shaped with extensive research, evaluation, and intergenerational scientific endeavour. Mātauranga Māori provides our original instructions, 'building the tools and making the rules' for us to live in harmony and balance with and within our spiritual, physical, environmental, and human domains."*
- Wikuki Kingi, Tōhunga Toi Ake, Pou Kapua Creations

Pou Kapua Creations Trust, led by Wikuki Kingi and Tania Wolfgramm with our trustees Rachel Wolfgramm and Korotangi Kapa-Kingi, has decades of experience in delivering services both locally, nationally, and in the global arena. Since his childhood, Tohunga Toi Ake Wikuki Kingi, Chief Designer of Pou Kapua Creations has worked under the direction of Te Uranga O Te Rā Kingi, Tohunga Whakairo, and associated Master Carvers of Te Ranga Carving Academy, the elite carvers for the Kiingitanga who collectively have over 200 years' experience. With over forty years' experience, Wikuki is well known for his creative talents and outstanding expertise in Aotearoa, in the Pacific, throughout Indigenous communities, and around the world.

TE HA TECH COLLECTIVE - DESIGNING INCREDIBLE VR EXPERIENCES TO SHAPE NEW REALITIES!

SENTIO ERGO SUM

CAPABILITY: DESIGN / RESEARCH

The TE HA TECH Collective has a track record in digital product research and design, and capabilities across multiple channels/devices including web, mobile, tablet, touch table, TV screen, and transformative / VR / immersive interactive experiences. Our capabilities include:

- Full spectrum design methodologies
- Immersive experience design – VR, AR, MR
- Cross-platform content strategy and design
- Content design and research
- Data visualisation / motion / animation / gaming design
- Interaction design
- 3D modelling and printing design
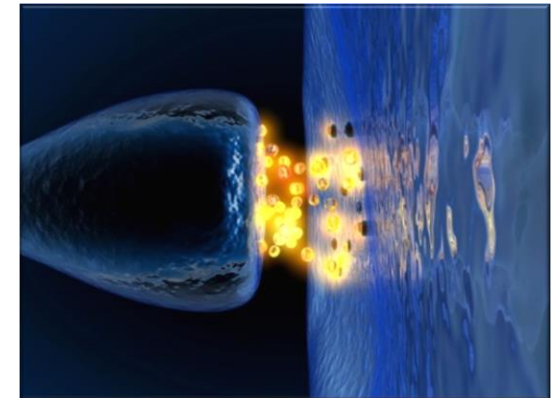
The TE HA TECH Collective, comprising Pou Kapua Creations, Hakamana, Reality Virtual (RV), and IDM Agency / River, with several key associates and partners have decades of experience working in digital design and have designed and hand crafted immersive digital experiences (including VR in the last few years), platforms, user interfaces, experiences, brands and collateral. Design has included 3D animation, game design, 3D modelling, simulation and design (including work with Autodesk Maya) and home automation PC systems using natural language, as well as user interfaces, websites, platforms and digital experiences. Building on decades of knowledge and skills as creative specialists, artists, and designer, our primary focus continues to be the design development of immersive media technologies.

With a background in brand strategy and web design, we understand the importance of incorporating beautiful design into even the most technical of projects, to ensure seamless user experiences and uptake. With experience and both branding and content development, we also understand the importance of using existing brand stories, assets and narratives consistently and correctly to build ongoing trust and credibility with a target audience. Whether it's working with lifestyle brands such as Mini, industry brands such as Counties Manukau DHB or a number of SME's, we have extensive design experience.

While we are researchers, designers, and developers, we are also Māori / Pacific / Kiwi and have been designers and creators of wonderful taonga / treasures, providing rich and deeply meaningful content and stories for the people of Aotearoa, the Pacific, and the world to experience. Acknowledged as world leaders in the creation of cultural treasures, and building on decades of skills and experience, we are moving our creation of incredible cultural content from 3D to 3.5D…4D+

CAPABILITY: TECHNOLOGY DEVELOPMENT / DATA SCIENCE

The TE HA TECH Collective has extensive knowledge and experience in data analytics designing metrics to capture behavioural data, as well as data gathering and metrics from other sources, dashboard development, data insights, KPIs, and general analytics using a variety of tools. Our capabilities include:

- Computer / data science and data analytics
- Geo-location – blended physical / digital experience analytics / SEO and SEM
- Front-end development (HTML, HTML5, CSS, JavaScript, BrightSign suite etc)
- Back-end development (Ruby, Python, PHP etc)
- Full-stack development / Cross-platform product development
- Open source/open standards
- Solution architecture: research and development
- DevOps / API development and management
- Mobile and tablet development using open web standards

With a speciality in bespoke online development, API integrations and data management, the TE HA TECH Collective has a wealth of knowledge and experience when it comes to capturing, managing, and interacting with data. We have experience both integrating existing data and analytics tool into online solutions, as well as capturing custom data to transform and display back to the user as needed. The Collective has worked extensively with GIS systems (e.g. for environmental scanning); completed comprehensive research and data analytics about geo-location music streaming platform about distributing content using natural language.

We also have a strong emphasis on advanced robotics & autonomous operations for large data acquisition of 3D environments. We have developed our own digital frameworks and platforms based off cutting-edge open source technology so that we're not limited in the online experiences we can create. And we have implemented our own strategically-led workflow method that allows for digital innovation and creativity alongside risk management and mitigation.

Our real strength, TE HA TECH with IDM and RV has a history of architecting, designing and developing a diverse range of visually and technically powerful web solutions, platforms and online technologies. We have designed and developed our own digital frameworks and platforms based off cutting-edge open source technology so that we're not limited in the online experiences we can create. We have implemented our own strategically-led workflow method that allows for digital innovation and creativity alongside risk management and mitigation. From forensic accounting for sporting institutes through to managing data for lifestyle brands such as Pump or managing hundreds of thousands of products and integrating artificial intelligence for companies such as Real Groovy, we can manage and streamline the most complex of datasets.

CAPABILITY: VIRTUAL REALITY | DIGITAL ASSETS | IMMERSIVE GAMING EXPERIENCES

The TE HA TECH Collective has streamlined the process of asset and environmental capture, delivering ultra-realistic real-time CG experiences, combined with the ability to create a range of online experiences. Our photogrammetry to virtual reality pipeline has been perfected into an art. We are effectively encapsulating reality in all of its visual nuance, creating nothing short of a 'being there' sensation for real-time VR applications. This process is a godsend for digital storytelling, VFX cinematography productions, innovative viral marketing strategies & end-user experiences alike. Our capabilities, experience, and points of difference include:

- VR development and production
- 4D Photogrammetry / VFX cinematography
- Motion and gesture responsive systems
- Tangible and fiducial marker response systems
- Experience and interaction design for blended physical and digital experiences
- Motion graphics / Photogrammetry / UAV / Drone / 3D scanning
- CG; Green Screen; Voice Over integration
- Wearable audio, visual, and haptic devices development
- 6° of movement 'true VR' cinematography - photo-realistic 3D asset & environment acquisition for VFX / VR / Desktop / Mobile & Web applications.
- 3.5D Volumetric human performance capture at a commercially acceptable compression ratio for rapid successive content creation.
- In-motion time-lapse techniques, FPV (first person view), head tracking stereoscopic 360° cinematic capture, in-motion 4D photogrammetry techniques and virtual reality (VR) cinematography / simulations.

Unique post production & signal processing techniques including the development of Deep Learning image enhancement and automation throughout our 3D+ pipeline for PBR workflow. We have a strong emphasis on advanced robotics & autonomous operations for large data acquisition of 3D environments. Our technology delivers the ability to get far more intimate with assets and environments in virtual reality and online experiences than you ever could in the real world - lean right in and admire every nuance and every paint stroke in your own personal universe. From a real-world environment, to billions plus dense point cloud data scan, to an oculus rift streaming at 90fps our workflow / pipeline retains all the intricacies of the original scene. With 3.5D in-motion volumetric capture, we can encapsulate a natural feeling human performance. When paired up with our photo-realistic environmental scans, combined with our experience for digital storytelling, we are able to create incredible user journeys and experiences using VR, AR, digital innovation and online development. Photogrammetry partnered with Deep Learning is another avenue we strongly focus on. For our Collective it's all about signal processing; AI enhanced super resolution, and procedural photogrammetry; industry typology surveying utilizing ground station way point navigation; HDR video and more … the latest technology utilised and integrated to bring the best VR to the world.

CAPABILITY: MEDIA PRODUCTION

TE HA TECH has extensive experience in producing compelling stories in multiple locations and channels, timely production and post-production services, with high production values. Our capabilities include:
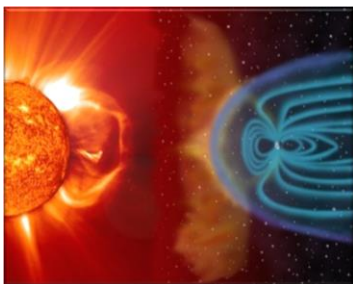
- Videography / Animation
- Editing / colour-grading / post-production
- Public digital experience design / production
- 360 video production
- Projection mapping
- Sound design and composition
- Sound recording / engineering / subtitling / transcription

TE HA TECH have worked extensively with videography, animation, visual and sound design, with core members being sound engineers and specialists. Diversity across video production outputs is integral to many of the projects undertaken by IDM. The Collective includes Reality Virtual whose ultra-realistic 3D capture of pristine artwork with UAV and ground-level based photogrammetry of assets & environments of significance is their expertise. Digital cultural preservation of indigenous communities and heritage sites, nostalgia, captivating VR storytelling and engaging online journeys of times past, interactive experiences, gaming or typology surveying.

TE HA TECH through Reality Virtual have also streamlined our ultra-realistic photogrammetry to virtual reality pipeline into an art, with a focus on: 6° of movement 'true VR' cinematography - photo-realistic 3D asset and environment acquisition for the purposes of VFX / VR / Desktop / Mobile & Web based applications; 3.5D Volumetric human performance capture at a commercially acceptable compression ratio for rapid successive content creation; unique post production and signal processing techniques including the development of deep learning image enhancement & automation throughout their 3D pipeline for PBR workflow; virtual reality, mixed reality, augmented reality; applications for immersive media technologies. These are scalable (e.g. back to 360° video production).

TE HA TECH through IDM has also developed a bespoke web framework built on top of the open-source laravel platform so that we are able to truly customise all aspects of a website or online application and have also developed our own project management process that combines creativity with risk management to guarantee results. Our projects have included international project management platforms for groups such as Oceania Football Confederation working with Unicef, bespoke E-Commerce solutions for brands such as Real Groovy and Innocent Packaging, lifestyle digital experiences for brands such as Pump and Mini, membership platforms, websites and membership experiences for companies such as Auckland Badminton and Motivate Me, to name a few. We have also integrated hardware API's into our web projects to break down the barrier between digital technology and real-life experience.

CAPABILITY: BUSINESS – STRATEGY / DEVELOPMENT / TRANSFORMATION

Team Members of the TE HA TECH Collective also have degrees in Commerce, Business, Management, Design Processes, R & D Methodologies, and Computer Science. They are strategists, entrepreneurs, with extensive skills and experience design thinking, lean, and agile methodologies. Tania is also the founding member of the Aotearoa New Zealand Evaluation Association and evaluation specialist. With business strategy and digital strategy at the core to IDM's approach to digital innovation, IDM's strength in digital productization, digital monetization, digital strategy and business have supported the ongoing success of their bespoke digital projects and set a foundation for success with TE HA TECH. The team are leading-edge technologists, including expertise in visual capture and photogrammetry and VR design and development. They also bring several years of experience with games concept, design, and development.

The TE HA TECH Collective have a good track record in digital product and services capability across multiple channels/devices including web, mobile, tablet, TV screen, or transformative or immersive interactive experiences. Rapid prototyping, iteration, testing, openness, modularity, usability, personalisation, sustainability and flexibility are important factors for our digital products. Having worked with a range of companies on digital innovation from start-ups to existing incumbents, IDM have many years' experience working with agile business models and agile development approaches, prototyping, MVP demos, and more. Our capabilities include the following:

- Business and digital strategy; VR and Platform Product development pipeline
- UX, UI, User Research / analysis; Prototyping and proofs of concept
- Web / Online applications; Streaming; Dissemination / distribution

WORKING WITH MUSEUMS

TE HA TECH has extensive experience working with museums, including curating at Waikato Museum, designing and developing both permanent (e.g. Te Winika Gallery) and temporary exhibitions events. We have worked with the Auckland War Memorial Museum who wish to include MANA VR (Pou Kapua in VR) as their first VR acquisition. We have also worked with Te Papa Museum of NZ on exhibitions. And we will continue to connect with museums internationally through our global alliances (e.g. Native Science Academy, International Education Institute, TE HA Alliance, Exploratorium CA, The Met NYC, National Museum of the American Indian, DC). Strengths of TE HA TECH also include unique post production & signal processing techniques including the development of deep learning image enhancement & automation throughout our 3D pipeline for PBR workflow; development of our own digital frameworks and platform technology so that we're not limited in the online experiences we can create; and implementation of our own strategically-led workflow method that allows for digital innovation and creativity alongside risk management and mitigation.
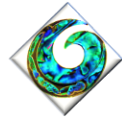
go there … before you get there …

global reach
initiative

global reach initiative

HAKAMANA

realityvirtual

≈RIVER

POU KAPUA

Google My Business Trusted Verifier

Google Street View ✓ trusted

Local Guides

TE HA TECH
Collective

Sharing Cultural Treasures with the World

WHAOTAPU
Cultural & Creative Solutions

SENTIO ERGO SUM

I FEEL THEREFORE I AM

Blueprint for Transforma...

Images courtesy Pou Kapua Creations, Reality Virtual, IDESIGN Media, HAKAMANA, Pacific Voyagers, NASA, Google Images

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Whaotapu Trust:	www.whaotapu.com
Ekarus Studios:	www.ekarusstudios.com
Planet Māori:	www.planetmaori.org

The Star Compass of the TE HA TECH Collective is an instrument born of the ancient voyaging traditions of the people of the great Pacific Ocean.

The Star Compass helps us to navigate across vast oceans to distant horizons. The TE HA TECH Collective invites you to journey with us as Wayfinders – as we experience future realities.