KO TE MĀTAURANGA MĀORI ME TE WHAKAAHUA TAONGA TUKU IHO

I tēnei tau, i mahi tahi te ESR ki te iwi o Ngāti Rangitihi nō Matatā me tētahi kamupene e mātau ana ki te mahi whakaahua ahu-3, arā, ko Blue Cube Consulting, ki te waihanga mai i tētahi pūrere whakaahua mariko mō ngā marae. Ko Te Rererunga te ingoa o tēnei pūrere. Ko te tauira tuatahi tēnei o tētahi ratonga whakaahua taonga tuku iho. Ko te whakaaro matua, ko te pupuri kōrero mō ngā marae mā te waihangatanga mai o tētahi "ara hīkoi" whakaahua ahu-3 e mau ana i ngā kōrero tuku iho ki tētahi pūranga rokiroki.

Ka whakatūria tēnei kaupapa i runga i te mātauranga whakaahua ahu-3 i ngā wāhi taihara me te hangarau whakaahua wāhi taihara (RPV) a te ESR. Ko te whakamahinga tuatahi tēnei o ngā pūkenga whakaahua ahu-3 i tētahi horopaki e pā ana ki te ahurea o te tangata. Ka whakamahia te mātauranga hopu wāhi a te ESR, arā, ko te karapa taiaho ahu-3, ko te whakaahua whakaine me ngā pūrererunga hopu whakaahua ki te hopu i te katoa o te marae o Matatā. (tirohia te whakaahua ki runga ake rā). Ka tāpirihia atu ngā pārongo me ngā whakaahua ki te whakaahuatanga o te marae, kātahi ka whakatakotohia ngā kōrero katoa kia puta mai tētahi whakaaturanga mariko mō taua marae i tōna anō tūranga.

MĀTAURANGA MĀORI AND CULTURAL HERITAGE VISUALISATION

This year ESR partnered with Matatā based iwi Ngāti Rangitihi and 3D visualisation experts, Blue Cube Consulting to co-develop a virtual marae visualisation platform named Te Rererunga (the 'fly over'). This was a prototype Cultural Heritage Visualisation service with the idea of efficiently recording marae in order to create a "walk-through" 3D visualisation where history would be tagged to provide a complete archival record.

The idea built on ESR's 3D crime scene capture expertise and Rapid Pointcloud Viewer (RPV) crime-scene visualisation technology, applying 3D visualisation techniques to a new and unexplored cultural setting. ESR's scene capture expertise including 3D laser scanning, photogrammetry and drone capture were utilised to record the entire Matatā marae. (see image above). Information and images were then attached throughout the marae visualisation to present layers of information presented in context.

Mā Te Rererunga ngā maharatanga me ngā kōrero mō ngā whare me ngā taonga e tohatoha, e tiaki hoki i runga i tētahi pūranga mariko mō te marae me tana hītori. Mā Te Rererunga anō, ka ū tonu te mātauranga o te Māori ki tētahi wāhi anō, arā, mai i te kōrero ā-waha ki tētahi tukanga pāhekoheko e toro atu ana ki te iwi whānui e noho marara ana i ngā hapori o te motu. Otirā, ka whakapakarihia hoki ngā hononga i waenganui i te tangata me tōna anō marae.

Nui atu i te 750 ngā marae i Aotearoa, heoi, he ruarua noa iho ngā kōrero mō te hoahoa me te whakatakoto o ia marae, waihoki, ko ngā taonga i roto i aua marae. He mahi nui tonu te whai inihua, te whakatikatika rānei i te marae nō muri mai i tētahi aituā nui, i te hinganga rānei o te marae. Nā te pūrere nei, ka puritia ngā kōrero mō te tūpono ka pā atu tētahi o aua āhuatanga.

He ara pai tēnei e tūhono atu ai te ESR ki ētahi atu whakahaere, otirā, kua kitea hoki tētahi ara e taea ai te whakawhiti atu i te mātauranga pūtaiao ā-ture hou ki wāhi kē kia whaihua ai ētahi āhuatanga anō i te hapori whānui. He mahi ngahau tonu tēnei ki te rōpū o ESR, waihoki, he nui tonu ngā akoranga i roto i tō rātou hononga ki a Ngāti Rangitihi. Nā runga i ēnei akorangi kua rerekē te titiro o te ESR ki ngā kaupapa pūtaiao me te hapori.

He tīmatanga noa iho tēnei mō Te Rererunga. Kei te hiahia a Ngāti Rangitihi ki te mahi tahi ki te ESR mō tēnei kaupapa. Kei te kimi mātou katoa i ētahi tahua pūtea e tipu tonu mai ai tēnei kaupapa hou.

Mehemea kei te pīrangi koe ki ētahi atu pārongo mō tēnei kaupapa, kei te kimi huarahi rānei koe e whaihua ai tēnei momo hangarau mō ētahi atu kaupapa, tēnā koa whakapā atu ki te ESR.

Te Rererunga enables the sharing and protection of the memories and stories behind significant buildings and artefacts, by providing a virtual archive of the marae and its history. Te Rererunga also enables a transition of knowledge exchange, moving from an oral tradition to an interactive process that can engage with a wider and more dispersed community, enhancing the connection between iwi members and their marae.

There are over 750 marae in New Zealand and often there is only limited documentation available on the design and layout of a marae. This is also true for the invaluable significance of the artefacts contained within, both of which create a significant insurance and rebuild risk should damage or loss occur. The application acts as a platform to store available information in order to provide better protection for these unforeseen circumstances.

It was an excellent opportunity for ESR to build relationships while also investigating how leading-edge forensic expertise could be applied outside of forensic science and add value to other aspects of the wider community. The ESR team had a lot of fun developing this project and learned a great deal through their partnership with Ngāti Rangitihi, which has further shaped ESR's approach to exploring science and the community.

Te Rererunga has the potential to be further developed from this initial stage and Ngāti Rangitihi are keen to continue their partnership with ESR on this project. Together we are currently looking at co-funding opportunities to further this pioneering idea.

If you would like further information or are interested in exploring how this technology could be applied to other projects please contact ESR.

▸ **Mō ētahi atu pārongo**

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