

# MITIMITI ON THE GRID WHITE PAPER SERIES

## 01 | CONSIDERING THE ECONOMIC IMPACT OF FAST BROADBAND ON A REMOTE MARAE COMMUNITY

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### MIHI

*Ko Rangi kei runga, ko Papa kei raro. E tū ana i ngā kupu whakamihi ki a koutou ngā rangatira i tēnei Ao Hurihuri. E te iti, e te rahi, tēnā koutou, tēnā koutou. Mauri ki runga, tihewa mauri ora!*

It is our custom to acknowledge our ancestral parents – the sky and the earth – and those who help to lead us through this challenging and changing world. Indeed, to all of humanity, may our inherent forces be uplifted!

### PREAMBLE

This first paper of the *Mitimiti on the Grid White Papers Series* draws our attention to two themes. First, it summarises international research on the economic impact of fast broadband on communities, and second, it describes Mitimiti – a remote marae community in Aotearoa / New Zealand.

<sup>1</sup> Gigabit broadband is a 100-fold increase in throughput speeds for households and small businesses using fiber-to-the-home (FTTH) technology.

Together, they set the scene for subsequent white papers that detail the rationales and approaches that contributed to the initiation, build, and leverage stages of *Mitimiti on the Grid* – a telecommunications infrastructure project that continues to provide opportunities to its small community.

### INTERNATIONAL RESEARCH

Globally in 2014, infrastructure that provided fast broadband using fibre in small towns was relatively new. While the research indicated that a positive economic impact was likely as a result of the presence of fast broadband, the impact would be less so for developing countries and low-income communities (Minges, 2016).

While identifying the causality of positive economic impact was imprecise, a range of explanations were proposed. They included improved property values, improved economic performance through job creation, occupational changes and productivity gains (Blair 2018).

Sosa's (2014) study of 55 US communities in nine states found a positive economic impact in the 14 communities where gigabit broadband<sup>1</sup> was widely available. Those communities exhibited a per-capita GDP that was approximately 1.1 percent higher than that of the communities with little or no availability of those services. In dollar terms, they enjoyed over USD \$1.4 billion in additional GDP.

Sosa (2014) further asserted that these gains were likely due to the direct effect of infrastructure investment and increased expenditures, early shifts in economic activity

(e.g., job creation and occupational changes) and productivity gains. For example, Chattanooga, Tennessee attributed 1,000 new jobs, increased investment, and “a new population of computer programmers, entrepreneurs and investors” to gigabit broadband (Wyatt, 2014).

Since 2014, further and more recent research confirms that economic growth as a result of the provision of fast broadband has consistently been achieved. Further clarity on the causality factors noted above is also beginning to take form (Minges, 2016; Levin 2018; Briglauer & Gugler 2018).

By 2014, the emerging research signalled an opportunity. In the years leading up to *Mitimiti on the Grid*, the question had already been asked whether this small marae could experience positive economic impact if it had access to fast broadband and mobile coverage.

## ABOUT MITIMITI

Mitimiti is a small west coast community in Aotearoa / New Zealand’s Northland region. The iwi (tribe) is Te Rarawa and hapū (subtribes) are Hokoheha and Te Tao Maui. Its marae is Matihetihe. Like most marae around the country, it is a focal point that comprises land, a meeting house, dining, kitchen and bathroom facilities. It is used for meetings, celebrations, funerals and other events.

Mitimiti is a 4-5 hour drive north of Auckland and includes a car ferry crossing over the Hokianga harbour from Rawene to Kohukohu. The road winds westward through the small settlement of Panguru and onto gravel road to the coast where the dunes meet Tāpokopoko-a-Tawhaki – also known as the Tasman Sea.

The Hokianga region is named after its harbour, *Te Hokianga-nui-a-Kupe* (the great returning place of Kupe). The legendary Polynesian navigator Kupe is said to have arrived there from the ancestral homeland islands of Hawaiki. Tribal members say that he was the first navigator to reach these shores. In addition, they say that the Hokianga is the location of *Te Puna o Te Ao Marama* – the spring that is considered to be the source of all knowledge.

*Te Wananga* – gatherings for esoteric knowledge sessions – were held in Mitimiti up until the 1950s. It was one of a cluster that were held throughout the country.

In 1902, the coffins of 499 Chinese gold miners were being shipped from the South Island by the SS Ventnor for burial in China. Tragically, the Ventnor was shipwrecked off the Hokianga coast and several coffins washed ashore onto Mitimiti beach. They were buried in the ancestral burial grounds and dunes and continue to be cared for by the people of Mitimiti even today.

In more contemporary times, the Hokianga was the home of famous leader Dame Whina Cooper who frequented Mitimiti and who led the first land march in 1975 to protest the loss of Māori land. Mitimiti was also a key location in the 2009 film, *Strength of Water*, and famous artist Ralph (Raukura) Hotere was born in, and is now buried in Mitimiti.

## URBANISATION AND DISCONNECTION

Interviews with locals and descendants, including some of whom have now passed on, were held between 2010 and 2016. They gave several accounts of a bustling economic region, as told by their parents and grandparents. For example, in the early days of colonisation, Māori-owned trading ships were active and

there were many hundreds if not thousands of people in the region.

Initially, trade focused on the export of timber but by 1900 the forests were depleted. Once the land was cleared, dairy farming became prominent and Māori land-owners became dependent on their farms. However, the government closed the local Motukaraka Dairy Cooperative in 1953, leaving Mitimiti and the surrounding north side of the Hokianga harbour with barely an economic base. Interviewees felt that successive governments had continued to systematically and relentlessly dilute the economic prospects for the region.

This contributed to mass urbanisation. Interviewees said that as a result, many families also lost their land through activities related to the Māori Land Court and other processes of land acquisition – and so couldn't return. Thus, new and increasingly disconnected urban generations were born.

Over several decades, families continued to leave for jobs and education, and many left permanently for Australia and beyond. Mitimiti was considered by some interviewees to be a place where having to educate children away from the area was akin to accepting that they may never return. This continued depletion of the productive workforce left an imbalance in the population. Today, it mainly comprises older people and the very young. It also resulted in an over-representation of low-income earners.

By 2014, a dwindling number of locals remained to stoke the cultural *home fires* – the *ahi kaa*. They were responsible for traditional knowledge retention, physical, cultural and spiritual care for the local marae and burial grounds and tending

to the needs of visiting tribal members who were now living all over the world. Interviewees said they were concerned that those local roles could not be sustained.

While an estimated 120 people were thought to still live in the wider Mitimiti area in 2014, the population would increase by hundreds every summer when whānau (extended family) returned for the holiday season and support various events such as the kutai (mussel) festivals, fishing and sports competitions, and more. These events brought people back temporarily where they could reconnect. However, the main event that interviewees said brought people back home permanently, was their tangi (funerals).

## TELECOMMUNICATIONS INFRASTRUCTURE

The telecommunications infrastructure prior to 2014 included intermittent mobile coverage, which was possible at low tide on the Mitimiti beach using the signal from a Vodafone tower on the other side of the Hokianga harbour some 16 kilometres away. Alternatively, it was a two-hour drive return by car to the Kohukohu boat ramp for a poor cellphone connection.

Dial-up internet was still in use and fixed line broadband (ADSL) connectivity had only recently been made available to some Telecom<sup>2</sup> subscribers.

## IMPACT OF POOR CONNECTIVITY

Online services such as remote health, banking, education and training were impossible. Visitors

<sup>2</sup> Note, that same year in February 2014 Telecom was rebranded to Spark.

said they couldn't stay long without coverage or connectivity especially if their work or businesses relied on it. It was rare for anyone to move back to the area. The perception was that moving back inevitably meant unemployment or casual work at best.

The two small tourism businesses struggled to reach their markets due to very slow internet speeds, frequent electricity outages and limited or no cellular coverage. The following are snapshots of the experiences of locals and extended families.

BUSINESS OWNER 1 could get a reasonable 3G cellular signal and slow mobile connectivity in one corner of the house because it happened to be forward and high on a beachfront property. They said that without it their business would not be possible, but the low speed and lack of stability constrained the opportunities.

BUSINESS OWNER 2 used a dial-up connection, and couldn't video-conference with potential overseas visitors, use internet banking, research their competition, or access government online IRD services. They said that it took half an hour to do a single internet banking transaction and time outs were frequent.

THE MITIMITI FORESTRY TRUST office had no cell coverage or connectivity. Work that needed to be done for Trust business often had to be completed at people's homes. Legal and accounting documents necessary for the Trust's business had to be posted as hard copies from other cities.

VISITING BUSINESS OWNERS were unable to communicate with staff and clients while in Mitimiti so tended to keep their visits short. Despite the potential, they also couldn't offer paid online work to locals (insourcing) due to poor connections.

LOCALS WHO WORKED IN KAITAIA couldn't accept potential offers to work from home, despite it saving them a three-hour commute, or extra accommodation costs during weekdays.

STUDENTS AT MATIHETIHE SCHOOL couldn't do online tasks at home. Parents said it took at least four minutes to view a simple website – let alone a multimedia website. That is, for those who had any Internet service. The nearest library in Kohukohu was tiny and required a two-hour return trip by car. Alternatively, the library in Kaitaia was a three-hour return trip by car. Parents often sent older children to boarding schools in other parts of the country.

### WHY MITIMITI ON THE GRID

Ignoring the poor telecommunications infrastructure as something that might be solved later, the *Mitimiti on the Grid* project instead turned its attention to identifying several opportunities for economic impact. They included opportunities to start home-based businesses, insource online work, work from home, access markets for tourism or online trade, and access to education and training.

In addition, the costs of travel could be alleviated by using services such as remote health, online banking, online courses, digital video streaming, accessing the skills of the wider hapū (subtribe) for trade or professional services and fund-raising support, and importantly, access to emergency services, and acute medical support.

In several ways, Mitimiti replicated the low-income community conditions that had been described in the international research. Of particular concern was that this signalled the possibility that slow or non-existent broadband infrastructure and investment, could result in *further negative economic* impact over time.

Given the decades of economic deterioration in the area, and what interviewees said was an economy that had been abandoned by successive governments, the prospect of slow or absent telecommunications infrastructure was considered unacceptable.

The marae community had a few reservations about the possible negative impacts of connectivity and the potential encroachment on *tikanga* – cultural aspects and values – but the community gave its support to any efforts that might make fast broadband available, particularly if it could drive positive economic, cultural and social outcomes. The key was that the community would have significant management over how their cultural values could be aligned.

The idea that fast broadband could result in a higher level of productivity and help to curb urbanisation was compelling. However, the most important outcome for the community wasn't economic – it was that fast broadband could potentially bring more people home, more often, and for longer.

**NEXT IN THIS SERIES**

The next white paper tells the story of what made the timing perfect for this project, what the marae needed to do to be ready, and what the tech team needed to do to meet the unique challenges of the location. [Register here](#) with your email address to receive the second paper in the *Mitimiti on the Grid White Papers Series*.

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