Why I am a champion for Tasmania's NBN

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Much has been written about a reported high cost of the NBN. This paper looks at some of its benefits that are helping to make Tasmania potentially as much a centre of the economic world as London, New York, Sydney or Melbourne. Beyond economics, and significantly for Tasmania, it looks further at how NBN makes it possible to share in world trade from this environmentally rich part of the world with its wealth of quality human resources eager to fully exercise their worldly skills within the comfortable, relaxed and healthy natural lifestyle that Tasmania wishes to preserve.

It's not about politics

At the outset, this writer must admit to being passionately pro-Tasmanian first and foremost. I am not known for political preferences, and I do not support any particular team in politics. The National Broadband Network (NBN) rollout should not be about politics – it is about our local economy's health and Tasmania's future. In my eyes, we are collectively here all part of Team Tasmania, and if the ship sinks economically, we all drown. The same goes for the rest of Australia. Today, regions and countries compete for economic wealth. If people are the lifeblood of an economy, efficient modern communications will be the oxygen to fuel its performance and competitiveness.

Inferior and sluggish telecommunications infrastructure can only weaken the relative health of any economy. The people are our community, and for them to be happy and enjoy well-being and prosperity we need businesses and commerce that successfully employ, feed and sustain us. The Government's role is to provide the best infrastructure to facilitate opportunities for our businesses. In the world today, healthy communities need leadership, strong economies and a consistent, well thought out future strategy. A vibrant digital economy offers new opportunities for every existing community.

A future for Tasmania

Some 'ultra green' Tasmanian friends still think that pursuing economic wealth is akin to greed and business immorality, and that we can all live next door to virgin forests, on self-contained farms creating an abundant of local produce. The hippy dream that we can barter our surplus produce for that of our neighbours and remain economically self-sufficient independent of the outside world or of generating globally tradeable currency is a noble but self-defeating dream. It is the hallmark of a number of third world countries.

It is true that Tasmanians live on a beautiful island of abundance. There is premium seafood, plump beef, fat lambs, choice fruit and fresh vegetables, pure water and probably the cleanest air anywhere in the habitable world. Throw into that lifestyle mix exceptional cool climate wines, and a relatively small but well-educated population. There is also room for almost
anyone to own several acres of land, there are clean beaches, deep rainforests beautiful golf courses, and we consequently enjoy a great life-style.

So, why in Tasmania, is there any need to worry about the benefits of a National Broadband Network? Amongst the top ten contributors to Tasmania's economy information communication is currently ranked tenth, well behind processed metals of zinc and aluminium, tourism, manufactured goods [especially boats], wood and paper, mineral ores, seafood, meat, dairy products and other food and drink. This is at large a rural economy of only half a million people.

As international agencies increasingly tell us, the rest of the world continues to pollute and populate – and grow richer – while its lifestyle options are changing. The number of millionaires and billionaires is growing in places like New Delhi, Mumbai, Shanghai and Beijing, places where the sky cannot easily be seen due to choking pollution. From such places very wealthy people are looking to emigrate to virginal shores overseas, to places with breathable air and drinkable water. They are increasingly seeking healthy places offering a good lifestyle and from where their businesses can be remotely run using modern communications. Places also where local citizens with limited employment opportunities may be employed as gardeners, cooks, housekeepers and domestic servants.

This is not the future that NBN champions want or see for Tasmanian children, working for rich new over-lords who see into the future and plan to exploit it at the cost of all others.

Around the world telcos and other digital financial giants are doing well. The world's two richest men, Carlos Slim Helu and Bill Gates, have both made their money from the digital economy. Our paradise is changing. Working in mines, on farms, and in forests owned by billionaire foreigners is not the idea of a future for most Tasmanians. Neither is working in tourist ventures owned by overseas organisations.

Not long ago nearly all Tasmanians could afford their own homes. However, mainlanders and foreigners seeing our ideal lifestyle and cheap housing began to move to our shores, and soon our home prices rose. Now they are around parity with the mainland. Weekly rental for a Tasmanian working class family continues to rise. Already, many can no longer make ends meet. This is why this writer is a champion for the new digital economy. I understand the difficulties of running a small business and of living in regional Australia. I have been working in Information Communications and Technology now for 15 years, and it has provided my family with a very good living.

**Broadband around the world**

The announcement of the NBN was the realisation of the single most important piece of infrastructure in this country's history. Not only nation building – it is transformative for regional Australia and especially the two million small businesses across our country. I have been lucky enough to travel the globe extensively. Some 12 years ago, I visited Dallas, Texas, a city which back then had the vision to invest in fibre optic infrastructure. Today it is known as the 'Silicon Prairie' and has one of the highest concentrations of billionaires anywhere in the world. It is named for the high concentration of semiconductor manufacturing, telecommunications, and other information technology related companies in the area. Economies utilising technology can be profitable.

Before my eyes, two giant nations, India and China – not long ago considered third world rural agricultural countries – began to invest in the new digital economy. Simultaneously, they began embracing both capitalism and globalisation. The world economy is being transformed as a result.

In 1991, India was flat broke and China was crippled by communism. Globalisation has clearly benefited both India and China, lifting 200 million Indians and Chinese out of poverty and catapulting tens of millions more far ahead into middle class life.
As an example, in 2004 the Indian Government formulated its broadband policy. From 2005 onward, the growth of broadband sector in the country attained acceleration. The Indian Government declared 2007 as 'the year of broadband'. As of December 2011, India had the world's third largest group of Internet users (over 121 million users, of whom the majority only access the Internet via mobile devices); and as of February 2012 there were 155 Internet Service Providers offering broadband services in India.

Mobile Internet subscriptions, as reported by India's TRAI in Mar 2011, increased to 381 million. To compete with international standards of higher broadband speed the Indian Government took the aggressive step of proposing a $13 billion national broadband network to connect all cities, towns and villages with a population of more than 500 in two phases targeted for completion by 2012 and 2013.

Telecommunications is supporting the socioeconomic development of India and playing a significant role to narrow the rural-urban digital divide. It also has helped to increase the transparency of governance with the introduction of e-governance in India. The government has pragmatically used modern telecommunication facilities to deliver mass education programs for the rural folk of India.²

When only a few years ago I saw Australia not investing in fibre optics infrastructure and not even ranked amongst the top 50 OECD countries with such infrastructure, I knew we must change. Investing in the future of a nation is above politics, and should positively benefit the next generation and the one following that. How important is a positive outlook on the future? And what can an investment in digital technology accomplish? Steve Jobs helped build Apple Corporation in 1978. In 1985 a more conservative Apple Board dismissed Jobs from his managerial responsibilities and he resigned. Jobs, the visionary, returned to the failing company in 1997 and that year he opened the first online digital store. It was tied to a new build-to-order manufacturing strategy. His vision was in the creation and investment in new infrastructure.

**A local example of what digital infrastructure can do**

- Apple first began downloading songs in 2003. By 2010 they had downloaded 10 billion songs.
- In 2005, Steve Jobs invested in his "smart" digital technology infrastructure
- In 2008, Apple opened their online applications store. By Mar 2012, 25 billion apps had been downloaded around the world.
- Apple earned over $100 billion in 2011.
- In 2012, according to Apple's CFO Peter Oppenheimer, there are 550,000 apps in the App Store, including 170,000 for the iPad.
- Apple has paid out $4 billion cumulatively to iOS app developers through the App Store.

Tens of thousands of third-party iOS app developers now make a living off developing Apple apps and accessories for IPhone and IPad. My Launceston company is one of them. Our products sold in the Apple store to a world market bring direct overseas dollars into the Tasmanian economy. A new industry has grown up around Steve Jobs' vision of a digital economy.

**Other examples**

The NBN infrastructure will likewise allow new industries to grow – and there will be new industries where none exist today. Who could have predicted the social digital media revolution? Tasmania needs fast speed access to markets. For too long, regional Tasmania has lagged behind the cities; and the closure of banks and post offices to the detriment of rural
towns has changed the very fibre of our State, and also many parts of regional Australia for the worse. In a digital economy, modern online banking and telecommunications reverse much of that damage.

Small businesses and families returning to these remote locations overcome that old 'tyranny of distance' through instant connection and communication. Families and friends across Tasmania and elsewhere will be able to communicate with each other via high-definition video conferencing and to share video files and digital photos in real time. And people living in remote Tasmanian areas will have better access to medical specialists without having to travel long distances. Broadband allows for a telehealth program which allows clinicians to assess patients via videoconferencing.

The Department of Justice and Attorney General will be able to enhance its services with virtual and online courts saving rural people lost time from work and travel and accommodation costs.

Small digital economy based businesses can do business in the connected remote parts of Tasmania as easily as they can from anywhere else in the world. But we need connection. Then more Tasmanian jobs will be created in areas such as electricity, irrigation, health and transport by investments in smart technologies supported by broadband. Utilising 'cloud computing', companies will be able to access their information from anywhere and reduce costs. There will be more export opportunities for small businesses and greater access to local markets for first timers opening up new markets and ways of conducting business.

Businesses will save money on travel and reduce their carbon footprint by running businesses from home using high definition videoconferencing, as improved access to online services better facilitates finance and banking. Access to a range of Tasmanian Government Services will be made easier as agencies online allowing instant connection, information and payments through E-forms and filing (for example, tax submission) and renewal of business and trade licences.

The digital economy offers the rebirth of regional Tasmania. What does it mean to my regional small business? I have spent hundreds of thousands of dollars in the past when travelling for days to attend a single appointment. Seven years ago, when Nippon Paint in Shanghai asked for face-to-face real-time high-definition video conferencing with me and my staff in Launceston, I had to apologise, and admit that we were still somewhat backward; and I had to make old fashioned and expensive long plane trips with staff to China. Which country was third world? With 100 Mbit/s broadband speed my company in Launceston can join and level that international playing field, and host training and education sessions online, using cloud services, thereby reducing my company's overall costs – while increasing our productivity, gaining new customers, and delivering Real Rich Media to clients.

Broadband testbeds

Tasmania's Premier, Lara Giddings, said at the iAwards in July 2012 that in 2015/2016 Tasmania will be the first state in the country to be fully connected to the NBN, and it is critical that we make the most of this first-mover advantage. The NBN roll-out will not only create more than 800 on-the-ground jobs here in the final phase of construction, but will also open up new business opportunities for the future. It will enable innovation and improved productivity in food production, education, health, tourism and other industries. The Tasmanian Broadband Taskforce has set up broadband technology 'test-beds' to research and test the next generation of applications and content in areas such as smart metering, education, housing, health and small business.

One example is the University of Tasmania's HIT Lab AU and CSIRO's ICT Centre in Hobart and their collaborative world first SenseT program, which is set to drive economic, social and environmental benefits for Tasmania.

Their Magic Map enables users to access and interpret environmental sensor data as part of the SenseT project.
SenseT is one of the test-bed experiences being generated by the NBN in Tasmania. It is another good example of the potential Tasmania has to demonstrate to Australia and to the rest of the world how with innovative thinking and the NBN we can transform our economy, our communities and our lives. Its goal is to establish a world-leading 'sensor and knowledge' management network to drive economic, social and environmental benefits; firstly in Tasmania. It will establish and maintain an efficient and effective core infrastructure of sensors.

The use of sensors is not new. But networking existing and future sensor networks federated in a single system offers broad scale, cost-effective benefits. Sensor deployment can obviously assist and optimise functions such as when to irrigate or fertilise on the local farm. On a wider scale, when connected, they can report temperature and rainfall, and fire and flood warnings. These same sensors can provide supermarket customers with information about the origin of their food in-store. As new networks are enabled and integrated in the future, a new paradigm will be created in supporting better decision making in how we manage our resources and the environment.

In urban environments, applications like Magic Map help people to reduce their power consumption by allowing them to monitor energy usage online and switch off appliances remotely. Southern Water's Development of a project management tool to manage the roll-out of up to 52,000 water meters in southern Tasmania is now providing near real-time updates. The ability to better manage infrastructure in the future is obvious. Consider how in times of crisis, such as experiencing poor water pressure when fires burn into residential areas during bushfires, the immediate relief gained through the focusing of resources where needed.

The potential is limitless. As a real world laboratory, Tasmania is perfectly situated as a test bed to demonstrate the potential benefits of geo-located, real-time information because of its size, and the island's spread of urban, rural and wilderness areas. Tasmania also has a thriving research community and the highest per capita number of scientists of any state in Australia. Of comparable size to the republic of Ireland, West Virginia in the USA and Hokkaido in Japan, here is a test case for the world. Its success will see other regions follow, and eventually the potential of global connection.

Globally, it recognised that as our population grows, greater pressure will be placed on every aspect of our natural resources. This not just an opportunity to take agriculture to a new level of innovation and production. Governments, state agencies, businesses and individuals will need more efficient and effective ways to analyse data about population increases, human habitation and its movement and the planning of new infrastructure; and how to best integrate this with agriculture and wilderness assets. As both population and pollution grow, in the not so distant future an integrated global plan for the survival of our planet will become necessary. Long journeys begin with first steps.

In education, the St Peter Chanel Catholic School in Smithton Tasmania is one of the schools that have successfully used technology to adopt new ways of teaching. The school was one of the first in Australia to connect to the network (in November 2011) and it uses the Internet to share field trip experiences with other schools in remote parts of Australia in contact with Aboriginal communities. Remote learning and remote access to specialist teachers can be accomplished, plus collaborative networks for special interest/research groups and high-speed transfer of large data files.

**Why am I a digital economy champion?**

The answer is simple. I believe in small business and I enjoy living in clean air with beautiful green natural surrounds. My table overflows with local produce, wines and friends. A strong Tasmanian digital economy will allow me and my family and friends to continue living the dream and more importantly – gain direct entry into the growing digital world economy.

In 2015/2016 direct fibre optic connection to the premises will be available almost everywhere in Tasmania and we will no longer be located at the end of world – but rather slap
bang in the middle of it. The digital economy can increase Tasmanian productivity, ensure Tasmania's continued global competitiveness and improve our social well-being.

You know when people ask "Can Australia really afford such large investment?", rolling out the optical fibre to over 93% of the nation, I reply "how can we not afford to invest in this generational nation building project". I like the analogy of the Sydney Harbour Bridge and take my hat off to the architects, town planners and political leaders, who did not build a bridge for the day when it was opened in 1932 – they built a bridge that 80 years later, sees over 160,000 vehicles cross the bridge each and every day.

That was visionary, as is the NBN. Like everything else worthwhile in the world. It requires hard work, some risk-taking, and investment. NBN and digital technology have demonstrated very strong potential to grow our businesses and not only help Tasmania save its farms, orchards and wineries, but in particular help build a strong and healthy Tasmania for the future. With some broadband hindsight already, and a little imagination and hard work, its many benefits are all within our reach.

Endnotes

1. See http://www.tasmaniatopten.com/lists/economic_contributors.php retrieved 20 November 2012
2. See http://en.wikipedia.org/wiki/Communications_in_India retrieved 20 November 2012