

FIBRE

CITY

CITYLINK'S DIGITAL


REVOLUTIONARIES

Mayor's recipe
for growth

Trade Me gets
up on CityLink

Meet a
broadband
evangelist

You can bank
on CityLink



The digital revolution
has many heroes.
Leading the charge in
New Zealand has been
CityLink:

Richard Naylor became the Wellington City Council's IT Manager in 1986 and started a revolution which has left the capital as one of the world's best-connected cities.



The idea of linking buildings to exchange data came naturally to the young electrical engineer. He was soon putting fibre-optic cable between all council offices. Richard also observed queues of people at the council's front desk putting staff under pressure for such basic information as outstanding rates or property valuations.

"I said, 'This is stupid. We could let them dial in and they could do it themselves.'" An international democratic revolution was soon underway. He installed a Gopher server and Wellington City Council provided the world's first local government website, with free access for the few thousand residents who already had PCs.

The Internet's 'father' Vint Cerf was in Wellington in early 2006 for a major Internet governance conference; he praised the city for being arguably the first anywhere in the world to pull out its digit and establish a broadband network. Dr Cerf wasn't the first to notice what was happening. In the early 1990s, a consortium of major American telephone and IT companies such as Apple and Bell, were considering Wellington as an international showcase for city-wide broadband.

Vice President Al Gore was impressed too, but convinced the consortium that American cities should be the first to benefit from early broadband rollouts onto the information superhighway.

Rather more helpful political intervention arrived in 1992, when Fran Wilde became Mayor of Wellington. She had Richard resurrect the work done for First Cities and write an economic development strategy for Wellington, based on installing fibre-optic cable for broadband around the CBD. In September 1995, council approved the InfoCity project. This led to the formation of CityLink. There was a simple but crucial change in council by-laws to allow the attachment of fibre-optic cable to the city's trolley bus wires and power poles. This bright spark of an idea avoided the cost of digging trenches.

Richard began stringing up cable for a public network in November 1996. Fittings made in a colleague's garage were used to connect the cable to the trolley bus wires.

Soon cabling from building to building began. As people discovered what high-speed broadband could deliver, business took off. In one ten week period no less than 50 buildings were brought into the fishnet-type mesh. Some 50 kilometres of cable now link Wellington's CBD. Plenty of wire on which to hang a revolutionary idea.



“It was just a no-brainer. I knew that to attract and hold the little companies here, we had to be better linked.”



Establishing Wellington as a world-leading city in broadband was not on Fran Wilde's agenda when she became the city's mayor in 1992. She had set her sights on a new sewerage scheme and a stadium to host major outdoor events in the city and boost growth.

A visit from Richard Naylor and Charles Bagnall saw her quickly add a broadband network to her plans for revitalising Wellington. Having just finished 10 years as a Wellington MP and Cabinet Minister, Fran Wilde knew the importance of such infrastructure in stimulating and maintaining economic growth.

She had come into the mayoralty determined to revitalise a city that was flagging in growth and morale. As home to the civil service, Wellington had been knocked around by constant government restructuring and downsizing. It was also starting to lose some corporate head offices to Auckland and elsewhere. Some people

had a depressed view of Wellington and its future. As a politician, Fran had travelled and read extensively. She knew that broadband was critical to the way ahead; the case had just not been presented to her. When Richard Naylor and Charles Bagnall came to visit, the timing was perfect.

“It just seemed to me to be as important as roads.”

“They just needed somebody at the top to say ‘Yes.’ It was just a no-brainer. I knew that to attract and hold the little companies here, we had to be better linked.” The economic development strategy she commissioned from Richard Naylor sought to facilitate the enhancement of Wellington economically, socially and culturally by making



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maximum creative use of advanced telecommunications technology. The strategy identified leadership and a vision that was understandable and well supported as crucial to its success. CityLink took over implementation of the enabling broadband network from InfoCity.

Fran Wilde chose to be mayor for only one term before moving to another career, but in that short time she ensured Wellington became one of the world's first and still best connected cities.

"It just seemed to me to be as important as roads."

Ms Wilde maintains a keen interest in CityLink's achievements, chairing the inaugural Digital Cities conference it sponsored in November 2005. The reason for this conference was to assist other cities and regions to catch up on a capital idea.

Trade Me traded up on CityLink

When Sam Morgan started Trade Me in 1999 he had a big idea, a laptop and a connection into CityLink's Wellington network. Today, with Trade Me clocking up around 300,000 unique visitors every day, it still uses CityLink, though now its access is via a gigabit link.

Trade Me's Head of Technology, Jon Macdonald, says there is no doubting CityLink's importance to the success of creating New Zealand's leading on-line trader. He says any business, especially a start-up which needs a significant amount of bandwidth, should look at CityLink's services, rather than pouring precious capital into the profit streams of Telecom. "We as a company avoided any extortionate costs by using CityLink – that was very, very helpful to Trade Me."

These days, the sheer volume of Trade Me's business means the major telcos have now installed pipes to connect their customers with the on-line trader. But Trade Me continues to have a bias towards using CityLink's network services, where possible.

"One of the things that Trade Me values is dealing with a company that like itself is small and innovative." "And we enjoy dealing with people as friendly and focused as the CityLink team."

trademe 
Where Kiwis Buy and Sell

Broadband Evangelist Neil de Wit is Managing Director of CityLink



“Any community that sets out to match what Telecom offers, albeit somewhat cheaper, should hit the delete button.”

Neil de Wit talks about what truly high-speed broadband will do for New Zealand with the passion of a preacher. “Things are really starting to move. Any community that acts now should soon be able to connect at speeds that will make any Telecom service look extremely ordinary. And then we are really going to go places as a nation.”

When he joined Richard Naylor in 1998, CityLink was little more than a couple of desks, a handful of contractors and a lot of faith in a big vision. Neil has steered it from the nub of an idea to the hub of a

world-class infrastructure for broadband in Wellington’s CBD. Now CityLink is providing similar services in Auckland and is also assisting other regions to match Wellington’s broadband infrastructure.

A former Post Office technician, Neil became impatient with the glacial speed of the state’s telecommunications provision. He established a company, FibreNet, importing and selling fibre-optic cable and components, before becoming a foundation investor and director of CityLink.

Neil says Wellington was fortunate to have the vision and determination of Richard Naylor to establish its world-leading broadband network, assisted by a supportive council.

He says, however, that there is no one-size-fits-all template to getting a network installed and lit. “Each community’s solution is their own solution.” Communities need to look at their assets if they want to establish broadband networks to support growth and societal advancement.

Assets might include some powerful in-

dividuals, a local trust with some funding and a group of interested parties. Any community that sets out to match what Telecom offers, albeit somewhat cheaper, should hit the delete button. “You need to do something that telcos won’t do.” A founding ethic for CityLink was that its services needed to be “cheap and cheerful”. Like a budget airline, it was never going to compete on every route but would concentrate on a particular market segment. Neil compares CityLink to a ring-road. It can move traffic rapidly around Wellington but can’t get you out of town any faster. CityLink works because it was and remains a small, sharply entrepreneurial company, narrow in focus. It is based in CityLink House in Boulcott St, strategically sited between The Terrace and Willis St/Lambton Quay. Around 30 people are employed in an open plan office with Neil at its centre, accessible to everyone. The atmosphere is friendly but focused. Turn-over at around \$6m is a fraction of one percent of Telecom’s \$6b.

Byte-sized it may be but CityLink has

CityLink - you can bank on it

Bank of New Zealand was a foundation customer of CityLink in Wellington ten years ago, so it knew who to call when it needed similar high speed links in Auckland.

Jamie O'Donnell, Bank of New Zealand's manager of telecommunications services, said the bank needed to replicate the capacity and resilience of CityLink's Wellington CBD network in Auckland.

"We needed to connect our main buildings and bring data back to our data centres. We didn't really have any other options. Fortunately, CityLink was there – and they would put infrastructure in place if it didn't exist."

He says CityLink's Auckland network has proved 'really valuable' to the bank.

Using CityLink's dark fibre networks in Wellington and Auckland, the bank is able to access up to a gigabit of capacity.

"It provides a good backup as well as a functioning system. It is very reliable."

Jamie says he can pay the ultimate compliment to CityLink's service.

"I don't actually have a lot to do with them – and that's good from my perspective. But I know if I do need them, they will respond rapidly and cost-effectively."

That's a formula you can bank on.

grown from a start-up only a little more than ten years ago with just \$85,000 in funds, invested by 17 shareholders. "CityLink was founded on intellectual capital, not financial capital."

Now it is expanding from its Wellington base. It has cabled the core of Auckland's CBD in a co-trenching operation with TelstraClear. "This was done totally because we had clients who wanted us to be there" says Neil.

Peering (or internet) exchanges, allowing the free and fast swap of internet traffic between different Internet Service Providers (ISPs), have been established by CityLink in Wellington, Auckland, Palmerston North and Dunedin.

Neil De Wit can now be found regularly outside Wellington, evangelising the message: Real broadband can come and light up your community – and it doesn't need to cost the earth. Hallelujah.



Bank of New Zealand

Being Digital is not just a book



“In the US you are already able to download Desperate Housewives and watch it on your iPod in the morning on the train.”

There is no television in the inner city Wellington home that Carl Penwarden shares with his wife Sandy. No radio on the stereo. No video recorder. No alarm clock. No landline telephone. This is a futuristic home, as envisaged a decade ago by Nicholas Negroponte in his defining book, *Being Digital*.

Piped into the house is a gigabit feed from CityLink. This allows information to be received 500 times faster than Telecom's average 2Mbps broadband customer. A feature film can be downloaded in just 60 seconds. Wireless connectivity throughout the house means Carl can watch a film on his laptop as he exerscycles in the garage.

The home telephone is a VoIP (Voice over Internet Protocol) phone which connects via WiFi to the Internet. So Carl calls friends in Auckland or even Los Angeles without any toll charge.

“We don't have any need for a telly anymore either,” he says. “Live TV is going to change a lot.”

He watches the news via the on-demand clips that CityLink's network connections allow TVNZ to make available soon after broadcast. Radio is streamed via the PC into the stereo. CityLink has helped Radio New Zealand to become a market leader in streamed audio, both live and on-demand. You can now quickly get replays of most interviews and other programmes.

For years there've been projections about the integration of television, the Internet, voice and video. How Carl Penwarden lives today will rapidly become the norm. “After all the talk, convergence is starting to happen.”

Sky-style set-top boxes will mean the end of VCRs, even DVDs. The shift will be to on-demand IPTV.

“In the US you are already able to download *Desperate Housewives* and watch it on your iPod in the morning on the train.” Live television will endure only for events such as sport, disasters and elections.

Carl's role at CityLink is to take the ideas generated and turn them into products it can sell. One of his first tasks after joining the company in 2001 was to help set up CafeNet, the wireless network which allows remote access in cafes and other outlets across Wellington's CBD. It has proved a hit with many businesspeople and backpackers alike.

“Wireless is good for last mile delivery

- and the mile is getting shorter and shorter.” It supplements CityLink's dark fibre network. The company's core function is to provide serious bandwidth and a technical capacity to make applications work. This has been the unwavering formula from the start, resulting in perhaps the most mature broadband network in the world.

“The absolute magic of CityLink is we stick our knitting,” says Carl. “We want to be the best connectivity company and offer you a marketplace of services.”

Prior to joining CityLink in 2001, Carl worked for Nokia and earlier Telecom, as head of its access development group. He trialled DSL (Digital Subscriber Line) in his own home back in 1998, becoming the first New Zealander to have residential high speed broadband. But he says at that time it was hard to get traction on the services and applications that were possible.

“People in bigger organisations don't live and breathe the technology.” Here speaks a truly digital man.

• Carl Penwarden is currently on assignment for CityLink in Auckland.

When you're serious about Broadband call us today: 0800 424 895
or e-mail serious@citylink.co.nz
www.citylink.co.nz



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