

Australia at the Crossroads

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08 October 2008

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Thank you for the invitation to speak to you.

The nation and the world are now at a crossroads in many ways - the financial crisis, food, water, air, education, healthcare and so on. All need to be dealt with differently and enabled differently. Speed, decisiveness and conviction are imperatives.

Today I want to talk not just about how Telstra is aligning itself with the future, but also about how Australia can do the same so as to build prosperity and improve the quality of life of its people.

For any industry, the notion we are at a moment of economic challenge and fragility is hardly news. The unfolding global financial crisis is bringing wrenching change to firms, to regulatory structures and perhaps even to the economic paradigms that have dominated thinking for decades.

The world economy is poised amidst predictions of an economic slump in the world's largest economy, the United States, of a slowdown in Europe and recession in Japan and of a reduction in the growth profile of developing Asia, including China.

The impact of this shakeout on Australia's economy is still unclear. We must assume, however, that the strong demand for export commodities that has sustained ever higher living standards in Australia in recent years is no longer assured.

Yesterday's decision by the Reserve Bank to cut interest rates by 1 percentage point is a welcome sign that policy-makers are prepared to take bold action to support Australia's economy. But we must not stop at macroeconomic policy. Bold action is required on a much wider policy front - on the full ecosystem of the economy.

The reason is that the economic challenges this country faces go far beyond the immediate ones surrounding the financial crisis. In fact, we are seeing a series of challenges converge.

Australia is about to place a long-term carbon constraint on its economy. This will permanently change relative prices, corporate decisions and individual behaviour in ways none of us yet quite understand. It will force us to rethink where Australia's future growth, future productivity, future investment, future jobs and future innovation will come from.

We've already seen a marked slowdown in Australia's productivity growth in this decade compared with the 1990s. Australia has a record of economic reform. But the positive impact of past reforms has faded in recent years.

After rising strongly by over 2 per cent a year in the second half of the 1990s, Australia's multi-factor productivity growth has fallen dramatically to an annual rate of only 0.7 per cent in this decade, roughly half the long-term average.

Weaknesses in Australia's infrastructure - especially its knowledge infrastructure - are today more obvious than ever. These weaknesses from underinvestment have been masked to some extent by the resources boom. They can no longer be denied or papered over.

And sitting above all this, there's what I can only describe as a form of cognitive dissonance in the economic debate.

On the one hand, policy-makers talk about Australia leading the world in becoming a low carbon economy. This is portrayed, rightly, as the most far-reaching structural shift in the nation's economic history.

Yet the view that nothing much needs to change - that Australia can sail along in the slipstream of China's demand for our carbon-intensive resources - seems never far from the surface.

I find this rather bewildering. To my mind, it doesn't compute. Something has to give.

Don't get me wrong. This country has real economic strengths. And it's shown a capacity to make tough decisions in the past. But Australia's economy is at a crossroads - as profound as any encountered in the last quarter century.

Today's convergence of challenges calls for a more urgent focus on the drivers of tomorrow's prosperity. A tomorrow:

- where we are forced to do more with less;
- where our workforce will be older and smaller;
- where demands on health and education systems continue to grow;
- where we are reliant increasingly on productivity in the services economy; and
- where real-time decision-making is critical to global competitiveness.

To secure tomorrow's prosperity, we need to make choices. And to make good choices, we need to distinguish the important from the trivial - what I call the 95% issues; from the 5% issues.

Let me explain. A 95% issue is equipping Australia for the Gigabit Age. It's building a nationwide high-speed fibre broadband network, on time and on budget.

This is 21st Century nation-building; an enormously complex task given Australia's size, population and terrain. It requires massive investment, potentially more than the Australian Government has committed to the water crisis in the Murray-Darling Basin.

It also offers massive rewards, with benefits to the Australian economy estimated conservatively at \$200 million a month.

It won't be easy; it's high risk; but it's doable.

Now contrast this with a 5% issue - micro-regulating access pricing on next generation networks to the point where, guess what, no one invests in the first place. That's been the story of Australia's attempts to secure a high-speed broadband future up till now, a policy failure of epic proportions.

We need to change the game. In the case of the National Broadband Network (NBN), we're already way past the point where process is the answer. Every day we delay investment is a day of lost opportunities, as I hope to convince you today.

Making the transformation

After 17 years of economic growth, this should be a time of bold action, as Australia embraces the Gigabit Age, smashes the tyranny of distance, and replaces the constraints of the past with the opportunities of a real-time, high-resolution, high-definition world.

Broadbanding Australia is transformational reform that cuts across every part of our economy and every facet of our lives. Within our reach is a new era of collaboration, interaction and communication - moving from the physical to the virtual.

It means increasing business efficiency and reducing costs. It means working smarter and having more time for ourselves and for those we love. It means better education and health care. It means lessening our impact on the environment and improving our quality of life. It means future generations of Australians having choices and opportunities greater than we have today.

Whatever sector of the economy we work in, whatever part of Australia we live in, whatever field of human endeavour we choose to explore - a broadbanded Australia is a richer, healthier, more connected, more sustainable society.

The opportunities are here right now if we are prepared to act.

So what are we talking about?

We're talking about a world-class fibre network that stands the test of time; infrastructure that can deliver on-line services of all types - including information, entertainment and real-time, high-definition interactive video communications. This is *the* essential infrastructure of an information economy and a knowledge society.

Muddling along with 3 megabits or 12 megabits per second is no longer good enough. Australia will need 30, 50 or 100 megabits per second over time. Korea, Japan and some European countries already have or are building 50-100 Mbps fibre networks.

Just this month, an Oxford University study found Australia falling behind the likes of Russia and several emerging economies of Eastern Europe on broadband quality. The only country with broadband access and speeds considered adequate for future internet applications, such as high-definition video and large file-sharing, was Japan. The study also found significant correlation between a nation's broadband quality and its advancement as a knowledge economy.[1]

To understand future needs, you only have to look at the unprecedented growth in information traffic across our Telstra networks. We've seen a 90 fold increase in less than six years, and the pace of that growth isn't slowing.

Now imagine a household where:

- Dad is videoconferencing into a staff meeting;
- Mum is operating her home-based business;
- Tweens are playing networked video games;
- Teenagers are remotely attending university lectures; and
- Visiting grandparents are having a remote consultation with the family doctor.

You can easily imagine 100 megabits will not be enough for families and businesses in the future.

You can get some idea of what's possible from what we've done with our Next G™ network - the fastest, largest wireless network in the world covering 99% of the population across 2 million square kilometres, the equivalent of Germany, France, Spain, Italy and the UK combined.

With Next G™, Australians are solving problems in ways that would have been impossible just a couple of years ago. Across every sector, businesses - big and small - are streamlining processes, reducing costs and increasing productivity.

For a sector like financial services, the potential cost savings and productivity gains from greater teleconferencing alone are enormous.

Our senior leadership teams at Telstra have been able to reduce travel expenses, save time and cut carbon emissions by using telepresence sites in Canberra, Sydney and Melbourne for regular management meetings. We're doing the same with customer meetings.

Our back of the envelope calculations suggest that by substituting a telepresence approach for travel we were able to pay for the system in less than a year.

It's not just big corporates. Salmon breeders in Tassal, Tasmania are using video streaming to remotely feed fish from shore, cutting travel time, fuel costs and boat use and saving \$100,000 a year.

- Three-quarters of users say Next G™ helped their business run more efficiently, particularly by allowing staff to access the office IT system remotely.
- One in six business users across Australia, and one in four in remote areas, say they can now provide new or substantially improved services to their customers.

Think about health care - where Australia is spending 9 per cent of GDP and rising. Everyone knows we face a challenge from an ageing population. Everyone talks about closing the gap on indigenous health. If we are serious about better health outcomes and a more efficient health system, we have to get serious about high-speed broadband.

Just last month, Telstra teamed up with the Northern Territory Government, Rio Tinto Alcan and the Northern Land Council to announce a plan to Broadband the Top End, connecting Northern Arnhem Land to the nation's fibre optic backbone via 800 kilometres of fibre optic cable.

Now high-speed broadband will reach a population of more than 10,000 people in some of the most remote parts of Australia, with greater opportunities for improving health and education in these communities. For the first time, services like video-conferencing can be

made available, so medical specialists in other parts of Australia can help tackle problems like trachoma and diabetes.

Again, Next G™ provides a glimpse of what's possible in health care. A Brisbane-based medical imaging practice, Qscan, is using it to provide surgeons and physicians with rapid feedback on radiology scans of trauma patients.

We know time is a critical factor in treating people with severe head injuries.

High speed, high resolution access to medical images and reports allows critical decisions to be made in situations where minutes and seconds are crucial.

Previously, a specialist contacted at home in an emergency would have been still backing out of the driveway in the time it now takes him or her to log on remotely, look at the high resolution file downloads and send a report.

The high-speed network means a greater ability to share workload with significant increases in productivity. Qscan estimates that it's the equivalent of having an extra doctor available full time for two days a week.

Now think of the environmental challenges this country faces - everything from climate change to water security problems to biodiversity loss. A broadbanded Australia not only gives us the bandwidth to deliver more resource solutions than today, it also gives us the capacity to automate resource conservation.

Today, with Next G™ and remote sensors, the Australian Institute of Marine Science is starting to come to grips with stresses on the Great Barrier Reef - receiving data and images in real time from up to 70 kilometres offshore.

The links between high-speed broadband and reducing CO₂ emissions are equally compelling, whether it be:

- remotely managing power for appliances not in use;
- real-time freight allocation systems to fill empty vehicles;
- using teleworking to reduce commuter traffic; or
- better integrating public transport systems.

A study last year found that broadband-enabled strategies could help reduce Australia's annual emissions by 5% and save around \$6.6 billion a year in energy and travel costs for businesses and households.[2]

Yet bewilderingly, in spite of the clear link between high-speed broadband and more efficient energy usage, the telecommunications sector was ignored in the final report of the Garnaut Climate Change Review.

What about education - today Australia's third largest export earner. If Australia is to advance, let alone hold its place, as a competitive, world-class centre for education it needs broadband infrastructure for the Gigabit Age.

With schools, we've made good progress here in Victoria under the VicSmart broadband initiative, connecting more than 1,600 Victorian government schools to high-speed broadband. I congratulate the Victorian Government both for their foresight and for following through with real results that are making a real difference.

Telstra is also working with individual schools wanting to be technology leaders. For example, we've teamed up with the King David School in Melbourne, linking its different campuses, providing new resources and IT solutions and helping the school completely revitalise the learning experience of the students.

Last year, a teacher from the school organised an on-line class from Jerusalem. He essentially took the students on a remote tour of Israel, including the different holy sites.

The kids love it. The teachers are energised. And lessons are far more interactive.

Now think of those missing out because of our national failure on broadband.

One experience that has stuck with me is going out to a remote school at Blackall in Queensland. The students were making do with hardware that reminded you of what you used to see in black and white newsreels.

And they were making do with kilobits instead of megabits. It was taking three or four minutes to download the School of the Air program. The children would turn the computer on and go off and do something else before coming back for their lesson.

It doesn't have to be like this. Australia is one of the richest countries in the world. It prides itself on ideals of egalitarianism and equal opportunity. But if it wants to secure tomorrow's prosperity and hold on to those traditions it needs to get serious about state-of-the-art broadband.

With truly high-speed broadband, Australians can take their expertise to the world without leaving home. I'm a great believer in gaining international experience in one's chosen field, but the reality is that Australia is in a global war for talent.

To keep the best and brightest in this country - or at least make sure they still call Australia home - we have to offer them a real-time, high-definition, collaborative environment - so they can work easily with partners in London or Shanghai or San Francisco. They can stay in Australia if they want. They can travel less if they want, better balancing work and family in the process.

They can collaborate with the world's best and be part of global teams that are working at the cutting-edge of science, research and discovery - without having to physically leave our shores. The benefits of retaining our best and brightest, while still enabling them to use their skills around the world, are fundamental to Australia's future.

Now all these are good and worthy examples, but it's just scratching the surface. The fundamental paradigm for transformational technologies like broadband is that none of us know precisely where they will take us.

That was the case with railways in the 19th Century; with the motor car in the 20th Century; and it's the case with high-speed broadband in the 21st Century.

Ultimately, it's not really about the technology. The pipes and applications are important, but more important still is the end-to-end customer experience - the new opportunities, different solutions and expanded horizons on offer for businesses and individuals.

This is why holding the nation's knowledge infrastructure hostage to outmoded thinking and backward-looking regulation is self-defeating and, ultimately, dangerous.

So how do we make the transformation? Our own experience at Telstra, I believe, holds some powerful lessons.

First, you need to know where you stand - the good, the bad and the ugly.

At Telstra, we began our transformation strategy in November 2005 from a position that was not sustainable - declining market share, minimal new product revenue, retail costs growing at double digits, little innovation, and no differentiation in the market place. We were in serious decline.

Second, you need a clear vision of where you want to go and a roadmap to get there. In other words, you need to work out both the "what" and the "how".

For Telstra, the vision was to become an integrated company with the customer at the centre of everything we do. Where we deliver simple, integrated, intuitive, one-click capabilities for our customers, and in the process deliver long-term value for our shareholders.

But you also need to link the vision to the execution - the "how".

A key step was changing the culture of our organisation to one focused squarely on customer needs. We had to make it clear to everyone that we don't get up in the morning to please a government or the regulator; we get up in the morning to please our customers and our shareholders. And as part of changing the culture, we spent \$200 million retraining our workforce.

Our whole strategy was focused on value differentiation as a way of building sustainable competitive advantage. We had to differentiate our customer experience, through innovation and delivering premium value.

If Australia is to be globally competitive and sustain its prosperity beyond the mining boom, beyond agriculture, and beyond tourism, I believe it needs to do something similar at a national level.

In my three years here, I've observed that Australia's political system is good at the "what" - at identifying the challenges the nation confronts, be it the ageing of the population, the need to increase productivity or potential threats like climate change and water scarcity.

Where it struggles is with the "how". Without a strategy for "how" you get to where you want to go, the "what" doesn't take you very far. So you need an execution strategy, backed by resources, technological capability, skilled people and leadership.

Finally, you need to be pragmatic and make some choices. You have to place some bets and then get on with it.

That's what we did with Next G™. We invested \$1.1 billion building the network. We aimed to do it in a year; in fact, we did it in 10 months. We turned it on across the nation in one day - 6 October 2006. And since then we've continued to upgrade it, with a clear pathway to higher speeds and even greater capacity over the next decade.

That's what we did with Next IP™, the fastest IP network in Australia with unmatched coverage and scale, fully integrated with our wireless broadband network and offering world-class security with seamless access to 580 cities around the world.

The alternative for Telstra was to stay mired in process, unable to distinguish the 95% issues from the 5% issues, and at the mercy of forces (internal or external) interested merely in carving up the existing pie rather than growing it.

That, unfortunately, has been the story of telecommunications policy in Australia for too long. For too long, this critical sector has been left hanging a bureaucratic tangle of muddled thinking, backward-looking regulation and narrow, risk-averse special interests, resulting in an environment that does not encourage infrastructure investment.

Australia rightly prides itself on its market-oriented reforms over the last 25 years. Yet in this area there's been an almost messianic commitment to empowering regulators, rather than consumers; and to allowing governments, rather than markets, to set the signals for resource allocation, investment and innovation.

We need to change the game.

Time to engage

We need to try something new because the old ways of doing things haven't worked.

So my central message when it comes to the National Broadband Network is that it's time to engage. It's time to make some choices. In the spirit of Melbourne's Spring Racing Carnival, it's time to place some bets.

Telstra has proven that Australia can be world-class in telecoms. We have proven it with Next G™, with Next IP™, with our innovative approach to Market Based Management and with our media assets such as Sensis and Foxtel.

We're intent on proving it again by bringing the best fibre-to-the-node network to Australia. For three years now, Telstra has been doing the detailed, complex planning for the National Broadband Network.

No-one should be under any illusion that this is a massive undertaking. In all honesty, even Telstra will struggle to do this, with all our capabilities.

To appreciate the scale of the task, look at the US. Verizon, a company four times the size of Telstra, has taken five years to deliver a fibre network to one million customers in a much larger, much more densely populated market and having spent billions of dollars.

What the Government is talking about here is the largest fibre-to-the-node network by area in the world, covering some 9 million households. It will involve doubling the amount of fibre cable in the ground around Australia, at a rate of roughly 90 kilometres per day, every day over the life of the project. It will require tens of thousands of nodes to be built.

It needs to be done in a way that is integrated, seamless, secure and readily upgradeable for the future. Upgrading the national telecommunications network must be done with 100% precision. We need to physically cut-over every customer individually, without service disruption. The consequences for the national economy are truly dire if this job isn't done properly.

Let me pose a simple question to you - Who else but Telstra can do this? Who else has the network-building experience, the financial capacity, the technical capabilities, and the skilled workforce?

Telstra's competitors claim that they can, but their records say otherwise. Nine months after the Singtel Optus consortium was awarded nearly \$1 billion of taxpayers' money to build the OPEL regional network using a sub-standard and totally unsuitable wireless technology, it still hadn't connected one service to one customer. The government had to rescind the grant.

Even when Singtel Optus does build something, it doesn't do it properly. Its Hybrid Fibre Coax (HFC) cable network is basically growing cobwebs because Singtel Optus refuses to upgrade it, preferring to take the lazy road of relying on regulated access to Telstra's infrastructure rather than investing in its own end to end network.

Last month, Singtel Optus embarrassingly had to suspend its wireless broadband service offering - Fusion - because it had not adequately invested in its network with the right combination of spectrum, backhaul and infrastructure. Respected industry analyst IDC has rated the Singtel Optus 3G network as the slowest 3G network in the world while APC magazine has concluded that the Singtel Optus network is effectively unusable for wireless broadband.

With this record of failure after failure, it beggars belief that anyone would contemplate risking something as important as Australia's broadband future to such chronic underperformers.

Telstra's phantom NBN opponents are good at one thing - myth-making. Their whole strategy is to rely on a scare campaign about open access and competition.

Telstra's National Broadband Network will be an open access network. We've made that clear. It will be good for competition. Our competitors will have equivalent access as Telstra itself. And unlike our opponents, we are not asking for a prohibition on competing infrastructure.

But like any investor, Telstra needs to be confident that the returns on invested capital justify the risks. And that means we need a modern regulatory framework that supports investment, innovation and risk-taking. Otherwise, frankly, we have no choice but to look at other options.

And let me make clear. To even contemplate the prospect of further separation while embarking on such a massive and complex project is ludicrous in the extreme. If further separation is part of the NBN, Telstra is simply not in a position to bid or to build. It is just not feasible - technically or financially - to do this other than in a fully integrated way.

The multiple delays on NBN have not stopped Telstra from innovating, creating differentiation and value for our customers elsewhere throughout our business. But they have cost Australia dearly.

Be in no doubt, the national interest is at stake here. We need action. And delay must make way for investment if Australia is to embrace the digital economy and unleash the untapped ingenuity and entrepreneurial spirit that exists around this country.

Conclusion

Ladies and Gentlemen, it's time to 'call the question'. Building a world-class National Broadband Network is the biggest and most complex engineering project this country has ever seen. It is time for the great pretenders to put up or shut up. If they don't have their finances secured, then why are we delaying the build? If they don't have their detailed plans and their vendors in place, why are we delaying the build? If they don't have the skilled workforce, the tools, the equipment and the vehicles, then why are we delaying the build? Why is this nation's most critical infrastructure project being held up by people who have no intention of building and contributing to Australia's broadband future? It is time to call the question!

Telstra is ready to do this now - we have the finances, the world-leading prime vendor, the skilled workforce, the detailed plans and the network. So let's get on with the job and do it for the country's future.

After all, it should be about meeting the nation's objectives and needs for the next decade or two.

Telstra stands ready to do what no one else has done - again.

Thank you.

[1]Oxford Saïd Business School, "High-Quality Broadband Essential to Growth of the World's Knowledge Economies", Press Release, 12 September 2008. See also "Broadband access comes under fire", *Financial Times*, 12 September 2008. "In a survey by Oxford University and Cisco, the high-speed internet access of some developed economies of western Europe, as well as Canada and Australia, was outperformed by Russia and several emerging economies of eastern Europe".

[2]Climate Risk, *Towards a High-Bandwidth, Low-Carbon Future: Telecommunications-based Opportunities to Reduce Greenhouse Gas Emissions*, 17 October 2007.

<http://www.climaterisk.com.au/2007/10/17/telecommunications-can-help-cut-australias-greenhouse-gases-by-5-per-cent/>