GENEVIEVE BELL

Thinker in Residence 2009

ADELAIDE thinkers IN RESIDENCE

Government of South Australia

Getting Connected, Staying Connected: Exploring South Australia's Digital Futures

GETTING CONNECTED, STAYING CONNECTED:
EXPLORING SOUTH AUSTRALIA'S DIGITAL FUTURES

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Genevieve Bell

THINKER'S BIOGRAPHY

Born and raised in Australia, today Dr Genevieve Bell is the Director of the User Experience Group within Intel Corporation's Digital Home Group in Portland, Oregon. She is the driving force behind Intel's emerging consumer centred focus. Gathering a team of anthropologists, interaction designers and human factors engineers to transform consumer-centric product innovation, she has fundamentally changed how Intel envisions, plans and develops its platforms. Her team is responsible for setting research directions, conducting global comparative qualitative and quantitative research, leading new product strategy and definition and championing consumer-centric innovation and thinking in Intel's Consumer Electronics business and across all of Intel's platforms. Dr Bell has a PhD in anthropology from Stanford University and a new book forthcoming from MIT Press. She was recently recognised by Fast Company magazine as one of the 100 most innovative people in business.

FOREWORD

Over the next eight years, the National Broadband Network will deliver super-fast broadband services to Australian homes and workplaces. It will also deliver far-reaching impacts on the community life, and the sustainable and profitable future of South Australians for decades to come.

Our State must be prepared and well positioned to maximise the benefits that super-fast connectivity to the globe will bring. To do so, we must ensure that our people are highly literate in the digital world, and that the producers – as well as the consumers – of content, applications and services are active members of the global marketplace.

Dr Genevieve Bell, our 15th Adelaide Thinker in Residence, has played an important role in helping us with these preparations. Dr Bell has brought a wealth of insight and experience from her career as an academic, and from her industry background as Director of User Experience at Intel. She has specifically focused on recognising the importance of culture in adapting and adopting technology.

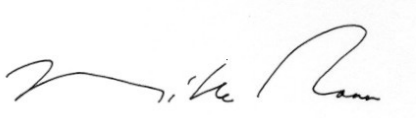
During her residency, Dr Bell travelled extensively throughout South Australia and investigated how we use technology today, and how we might use it in the future.

In this report, Dr Bell has identified a bold vision and strategies for effective engagement with technology. She has provided advice on the use of technology and digital literacy in education, citizenship and training, and for the development of a robust, digital economy.

Together with the South Australian Government's Information Economy Agenda, this report will help point the way to the digital future for South Australians. It is essential that we get it right.

I extend my thanks to Dr Bell for her commitment and her work, and for the contribution that she has made to our State.

It is my pleasure to commend this report to you.



Mike Rann
Premier of South Australia

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A FIRST THOUGHT

When the Commonwealth Government announced the National Broadband Network in April 2009, in addition to being confronted by a massive civil engineering program, they were confronted by the challenge to make broadband relevant to all Australians. The photograph on the cover of this report, taken just outside Morgan in South Australia's Riverland region, sums it all up. This sign points to two things: we still have work to do to transform the Internet from a destination to an essential service in our homes, offices and schools; and we also have work to do to transform the Internet from a discretionary destination into a meaningful part of our daily lives and rituals.

One evening, over several beers, a local cocky asked me to explain the Internet. I told him that high-speed Internet could deliver real-time news and weather, information, sports, banking, communication with others, digital video and photos. After a long pause, he looked at me and said, 'But I can get the footy on the telly and the weather once a day; the radio is always on in my ute, I see all my mates here, and I do my banking on my mobile and get jokes and porn there too, so why would I need broadband?' He hastened to add, 'And for the cost of a two-year contract, I could have a cattle dog and it'd be working tomorrow.'

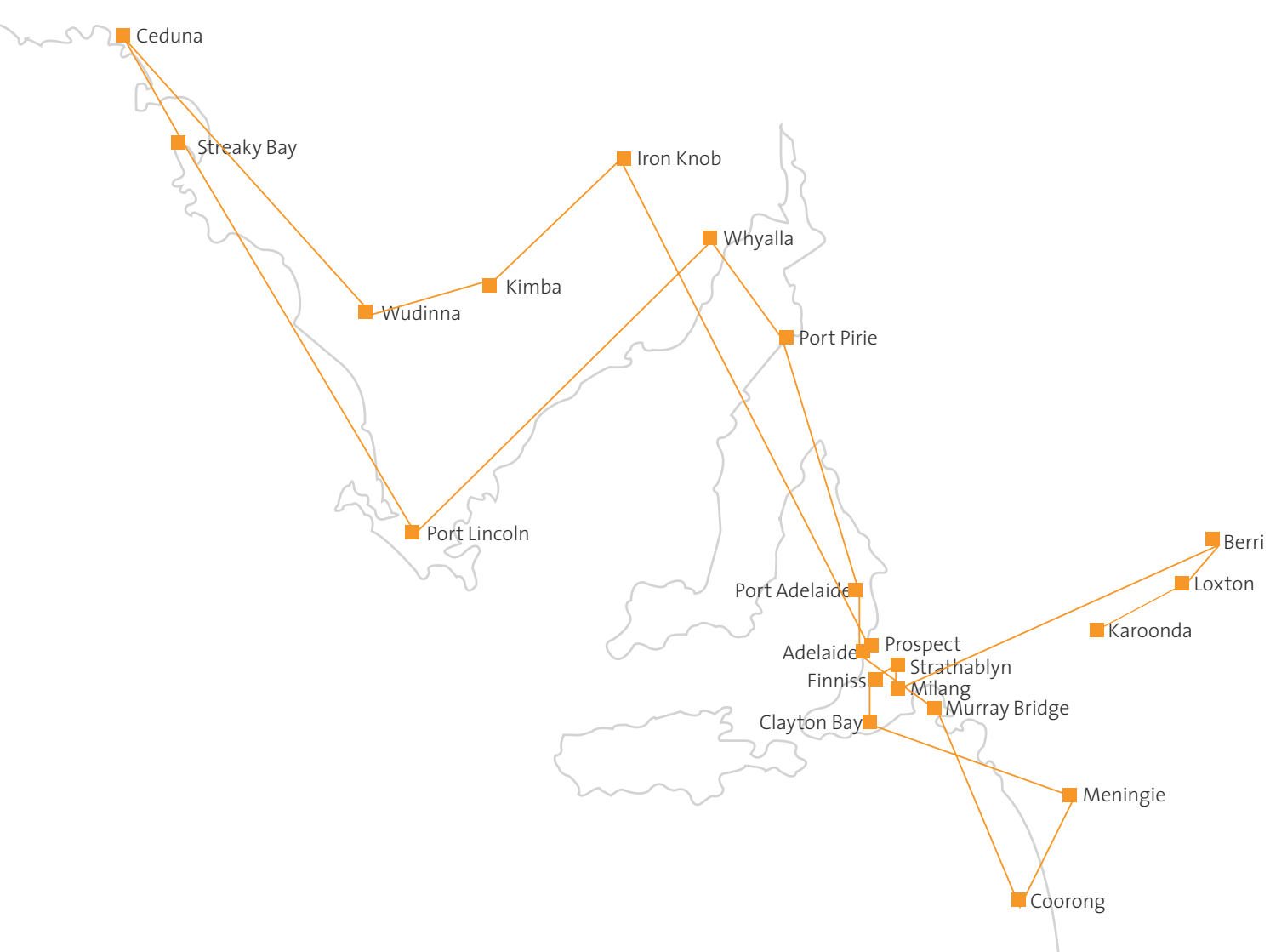
Now, of course, the majority of South Australians are online and using the Internet. But there is still merit in the cocky's questions, the ones about why broadband matters, and how much it costs, and by extension why a national broadband network with higher-speed connectivity will be important to all of us. This report is my attempt to find a set of answers to these questions, answers that are deeply rooted in the daily experiences of ordinary South Australians. Ultimately, this report advocates systemic change regarding the role and future of technology in South Australia. Developing a digital economy for South Australia is going to take a lot of work. We will need new forms of policy, regulation and stakeholder management, as well as new metrics and analytics for measuring progress and success.

THIS THINKER'S BRIEF

What role will the new information, communication and entertainment technologies play in the future of South Australia? That was the question this project began with, and when I became the 15th Thinker in Residence my responsibility was straightforward: help identify a set of strategic directions and opportunities for all South Australians with regard to these new digital technologies.

TRAVELLING ACROSS SOUTH AUSTRALIA

Genevieve Bell
Photo: Kartina Jungnickel, March 2009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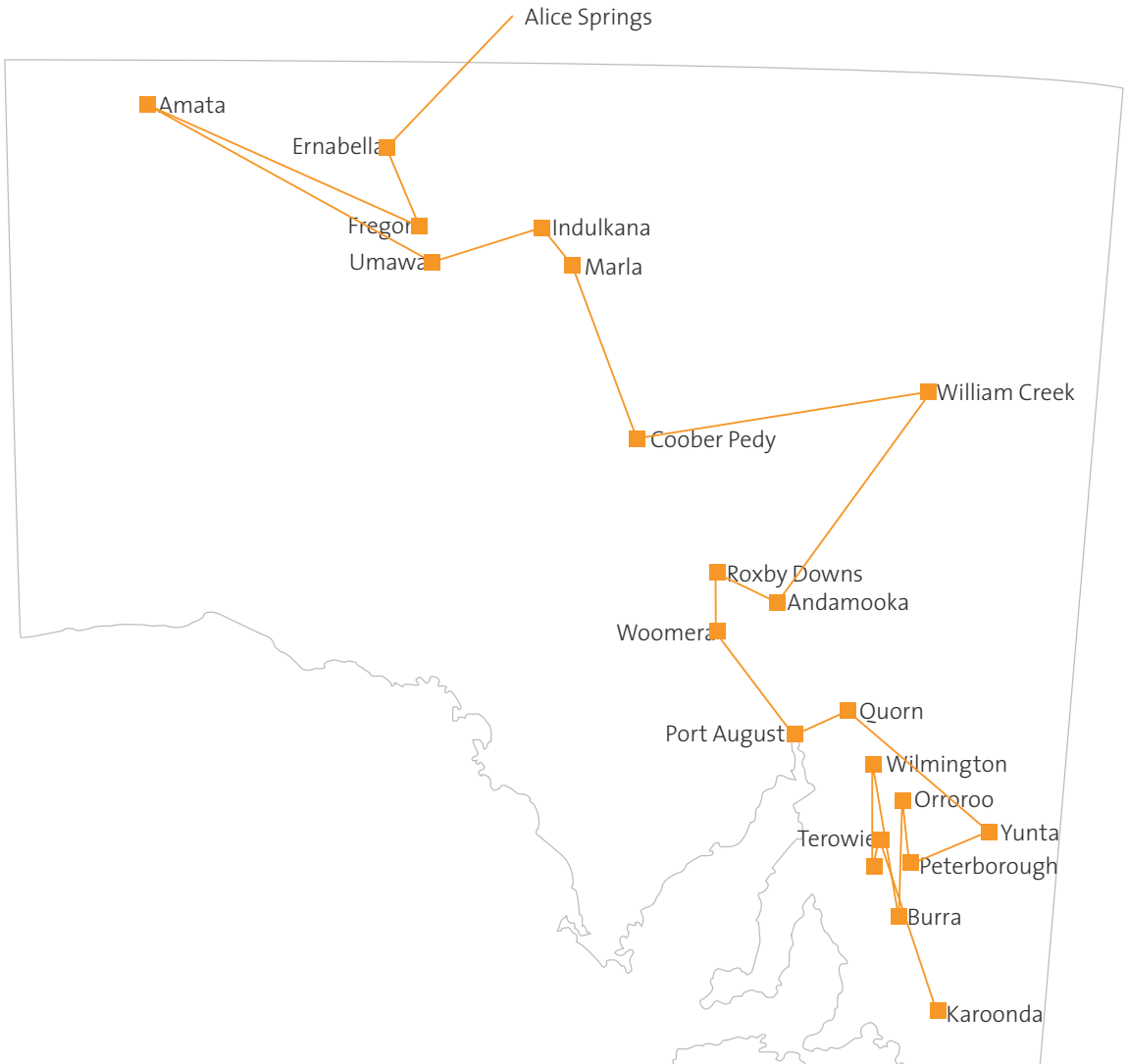

Alice Springs
Amata
Ernabella
Fregon
Umawa
Indulkana
Marla
William Creek
Coober Pedy
Roxby Downs
Andamooka
Woomera
Port August
Quorn
Wilmington
Orroroo
Terowie
Yunta
Peterborough
Burra
Karoonda

THIS THINKER'S APPROACH

"The purpose of anthropology is to make the world safe for human differences."

(Ruth Benedict, anthropologist, 1887–1948)

I am an anthropologist. I am also the Director of User Experience within Intel's Digital Home Group. I manage an inter-disciplinary team of social scientists, interaction designers and human factors engineers, and my team and I spend a lot of time trying to explain to engineers and computer scientists why people are important and why knowing something about what they care about should fundamentally shape the way new technology is developed. A key part of my early work for Intel involved fieldwork in Asia and Europe. I was extraordinarily privileged to spend time in the homes of hundreds of different families, getting a sense of what makes them tick and what they care about.

And when I get a chance, I still do fieldwork – and this predisposition underpinned my South Australian Thinker's Residency in a way that, I suspect, puzzled and frightened some of the bureaucrats with whom I engaged. In their minds, Thinkers sat and thought. But it was abundantly clear to me that to address the brief properly, I would need to talk to rural and Aboriginal communities as well as the urban and metropolitan ones. I needed to talk to South Australians about what they wanted and needed from new technology and to identify the big barriers to adoption. In short, I would need to do fieldwork.

As this project unfolded, it became clear that to talk to South Australians about their future technology needs and desires was really to talk to South Australians about their futures in the broadest sense. Technology is critical to any conversation about the drought, the global financial crisis, Aboriginal self-determination, regional identity, educational aspirations, the price of wool, petrol and real estate, families, communities – and even nationhood.

To be successful, this project had to be relevant. And to be relevant, I had to tap into what the people of South Australia were actually saying and thinking. I had to listen to the stories from South Australia's diverse communities, as these stories, ultimately, tell us a great deal about South Australia's present and its future. We ignore these stories at our peril. When I am in the field, I try to switch off my mobile phone if I can. I abandon my computer and I eschew the Internet. I read the local papers, eat local food and keep local hours. I talk to anyone who will listen and I listen to anyone who will talk. I walk the streets. I immerse myself in smells and sounds. In doing so I hope to achieve a balance of online and offline encounters with the people, spaces and practices around me.

I think I achieved these things in South Australia. From Amata to Mt Gambier, from Ceduna to Renmark, I asked all the 'stupid questions' of incredibly patient, tolerant and hospitable South Australians: questions about new technologies, information systems and socio-technical practices; questions that challenged the perceived wisdoms. Questions like: will having access to the Internet and laptops really improve the lives of kids in South Australia? Is social networking a good thing? Who is really on the other side of the digital divide? Do South Australians really want to be constantly connected?

For me as an anthropologist, fieldwork brings with it a set of responsibilities that I take very seriously. I have tried hard to stay true to the stories I have been entrusted with, including all the details and nuances, however inconvenient and contradictory they might be. When someone shares the details of their life with you, you have a duty of care to do the right thing with that information. In this report I have tried very hard to honour the people whose homes and businesses I visited. I have tried very hard to give them voice by telling their stories and making their points the way that they would like them to be told.

Our daily papers (and news websites) carry stories about new market dynamics and dependencies, a global financial crisis, a renewed interest in environmental issues, sustainability and resource management, shifting global forces and relationships, and the prospect of political and social change on the local, state and national levels. Running through all these stories, sometimes warp, sometimes weft, are new technologies. The Internet, mobile phones, social networking, pornography, filtering, virtual worlds, email, digital images, gaming consoles, and even spam, zombies and viruses are all implicated. As too are the critical twentieth century technologies – fixed line phones, television, radios – which remain important today.

This report is, in essence, a story about the role digital technologies will play in shaping South Australia. But somewhere in here there are stories, too, about how these technologies aren't really changing anything at all. And we have to be critical, smart and engaged enough to know the difference.

Emptying out the car.
Photo: Carolyn Anderson, March 2009

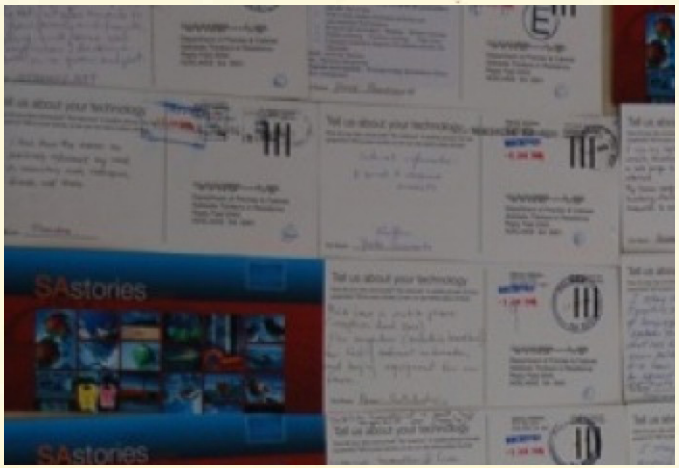
COLLECTING SOUTH AUSTRALIA'S STORIES

Collecting South Australia's stories was a big task. And it took a team of people, including: the members of the Adelaide Thinkers in Residence office; two project catalysts, Kristy Byfield and Gail Fairlamb; Katrina Jungnickel, an Australian sociologist; and members of the 13 partner organisations to this residency. Indeed, this project was supported by many of South Australia's government departments, as well as the federal Department of Broadband, Communications and the Digital Economy, South Australia's universities and a range of other public and private organisations. We sought to spend time in all the different regions of the state. By the time we were all done, we had driven 14,000 kilometres and visited 45 of the state's most diverse communities, from Adelaide to Amata and many points in between. We spent time in homes, classrooms, businesses, libraries, local councils, government offices, community centres, pubs and cafes, and we talked to a very wide cross-section of South Australians. It was amazing.

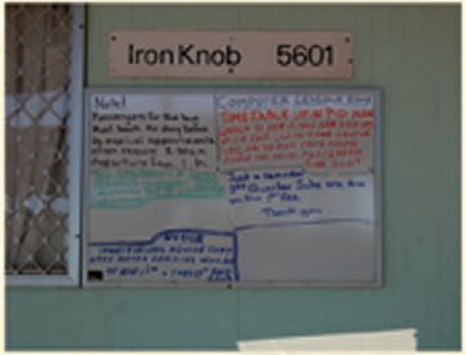
SAstories Project: We used the Internet and postcards to collect additional stories from South Australians. We ran an interactive website – www.sastories.com – where we asked people to share their stories with us. We also gave out postage-paid postcards. Over a five-month period in 2009, more than a thousand stories were received. This represents a remarkable cache of tales of technology from South Australia.

We hosted a series of community conversations in Berri, Peterborough, Milang, Roxby Downs and Andamooka. The open forums engaged communities around the core questions of the residency and drew an interesting cross-section of the population in each town.

I also worked with an A-Team – a group of ten young people from the Riverland brought together by the Office for Youth – who helped to inform this report. The team focused on questions around the role of technology in their own lives as well as in their broader communities. They had several very clear recommendations about the role technology could and should play in their futures. Their report was released in September 2009.



A pile of postcards.
Photo: Genevieve Bell, March 2009



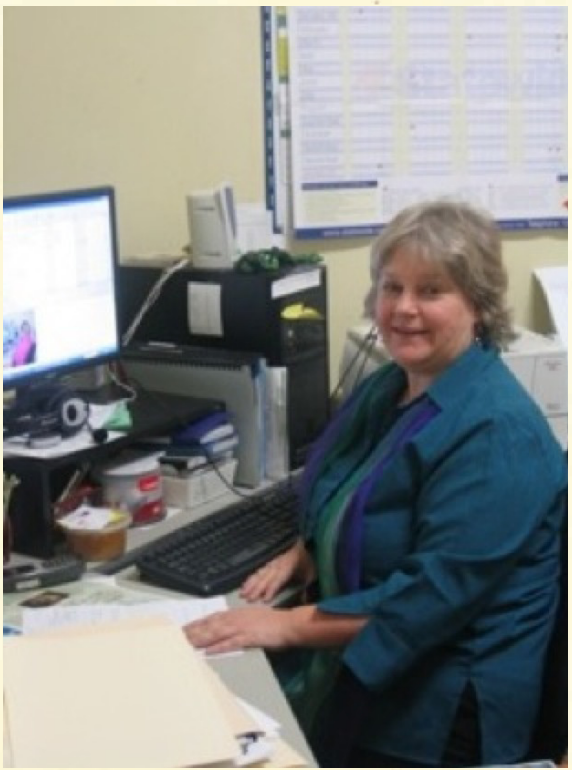
Repairing a flat on the Borefield road. Photo Credit: Carolyn Anderson, March 2009. Making dinner. Photo: Katrina Jungnickel, February 2009. Internet Access at Iron Knob post-office. The A-Team. Photo: Alison Kershaw, March 2009. Maree Internet Cafe. Photo: Genevieve Bell, March 2009. On the way to Kangaroo Island. Photo: Genevieve Bell, January 2009.

TELLING SOUTH AUSTRALIA'S STORIES

South Australia has historically punched above its weight in terms of innovation, scientific discovery and cutting edge technology. From Lance Hills (the Hills Hoist) to David Unaipon (sheep shearing mechanical hand-piece), John Wrathan Bull and John Ridley (wheat stripper), and Alf Traeger (pedal wireless), South Australians have contributed significantly to Australian productivity, connectivity and domesticity. However, today South Australia lags at least ten percentage points behind the rest of the nation in terms of broadband: two of the least connected townships in Australia fall within the greater Adelaide area. Regional, remote and Aboriginal South Australians fare even more poorly. Yet South Australia also contains one of the country's most connected communities. Roxby Downs is the second most connected town in Australia, with 86% of households having access to the Internet and 67% using broadband.

While South Australia does indeed trail behind the nation in terms of broadband uptake and Internet connectivity, those who are connected are highly engaged. Interviews, conversations and posts on SAstories.com reveal that South Australians have a remarkable range of digital devices, services, applications and experiences, and that there is a great deal of online engagement, creativity, innovation and participation.

Spending time in many different South Australian communities, I was privileged to meet and talk to a remarkable collection of people and I heard an extraordinary range of stories. Many others contributed their thoughts online and through postcards. This report focuses on ten emblematic stories – I heard versions of these stories everywhere we went. They are stories about people's relationships, both positive and otherwise, with new forms of technology.



Karyn Bradford, Milang Old School House Community Centre
Photo: Stuart Jones, August 2009

"There we sit in the evenings in the TV room, my husband, my daughter (17 yr) and myself each with a laptop connected to wireless broadband: surfing the net, talking on msn, responding to emails, paying the bills, selling and buying on online auctions and generally getting in touch with others online."

We have it all

Lots of stories came in on SAstories.com – but this one, from Kazza, just summed it all up:

'Dear Gen, Have to admit that we are a mob of Internet nuts at our house. There we sit in the evenings in the TV room, my husband, my daughter (17 yr) and myself each with a laptop connected to wireless broadband: surfing the net, talking on msn, responding to emails, paying the bills, selling and buying on online auctions and generally getting in touch with others online. I can't believe how important the Internet has become to us as a means of communication, information and dealing with the everyday ho-hum like paying bills (no bank in our little town). Broadband to the town was marvellous just 12 months ago but monthly costs are somewhat prohibitive still. I also have two sons and all of our children use text messages a great deal. I've found that I am really slow in responding to text messages – generally give up and ring instead, however I have now found an online messaging service from computer to mobile phone and now I can whip those SMS messages out to all and sundry, much better using all fingers rather than one thumb.'

South Australians are actively using all manner of new technologies. We use the Internet a lot, favouring social media and social networking sites, as well as sites with digital videos. Email remains a persistent and important part of how people communicate – sending email has also come to mean sharing photos, jokes, URLs, and video. All of this requires downloads and uploads which quickly eat into service plans and contracts. The slowness of connection affects people in rural, regional, and remote communities, as does operating behind various kinds of firewalls, including those provided to schools.

The Thinker's Kit
Photo: Genevieve Bell, May 2009

"They treat all this stuff like it is their vital signs. They are always checking everything just to see what's happening."

Life's overheads | vital signs

John walked into our meeting sighing, and said 'Sometimes it just feels like life's overheads are increasing.' John talked about the growing number of bills he receives for different services – the Internet, television, his mobile phone, electricity, his email account. And then there were technology devices that he has to charge and maintain – a phone, an mp3 player, a computer. For him, it all seemed to be a bit too much. The price of staying connected was pretty steep.

A journalist in the Riverland, describing her peers to me said 'They treat all this stuff like it is their vital signs. They are always checking everything just to see what's happening.' Her friends were always connected – they found ways of getting online and staying in touch throughout the day and night. This idea that websites, mobile phones and email accounts were a kind of digital pulse clearly made sense to her.

These are two really different ways of thinking about our relationship with technology. In one, technology is seen as vital; in the other it is burdensome. These two different ways of thinking about technology came up again and again, and were not clearly related to age or gender or degree of technology awareness. Instead, they appear to represent two ends of a larger spectrum of technology relationships. Most of us exist somewhere in the middle and swing between the two poles in different situations and in response to different needs.

Roxby Downs High School Students
Jarrod Walker, Tori McGauchie, Caitlin McKinnon and Rosalyn Ames
Photo: Genevieve Bell, March 2009

Three hundred text messages in a day

"I send a lot of texts; so many that I have to clean my inbox out every twelve to twenty-four hours. I bought $50 this morning and have $14 left at midday."

Josh and his mates Chris, Craig and Sam were comparing notes for me, telling me what technology they have. They are Year 11 and Year 12 students at the Peterborough High School and they were, in many ways, pretty typical of the teenagers I met throughout South Australia. Josh said, 'I don't know, I reckon I have all the basics – a mobile phone, Playstation, laptop, the Internet. I use Facebook and hotmail and check sport on msn. I reckon I send 300 texts a day.' Craig, who never used his phone for calls, only sent 100 texts a day, and was limited by his phone plan – he frequently borrowed his little brother's mobile phone when his own credit ran out.

Up in Roxby Downs, students report similar usage. Caitlan has been using mobile phones since she was 13 and there is a lot of technology in her home – computers, the Internet, and so on. She says, 'I send a lot of texts; so many that I have to clean my inbox out every twelve to twenty-four hours. I bought $50 this morning and have $14 left at midday.'

Clearly the kids of South Australia are frequently heavy users of technology – many of them grew up with it and it fills their backpacks, bedrooms and days. Ironically, schools are often the least technology-enabled spaces they move through. Of course, for every Josh or Caitlan, there were also kids who weren't using that much technology, who were most interested in sports or music or hanging out with their friends, or whose families don't have the resources to provide a high-tech childhood, or for whom technology is culturally or socially inaccessible. Assuming all kids are like Josh and Caitlan is to render invisible the experiences of many these young people.

Andamooka Community Meeting
Ted Jones, Paul Killeen, Murial Unic and Anne Nicholls
Photo: Katrina Jungnickel, March 2009

I don't know anything about IT, but ...

"It looked like the radiator fan, and I could see the bearings were broken, so I went up to my shed and found one just like it. I put a drop of grease on it, closed the whole thing up, and now it works!"

'Well I don't know anything about the Internet', but before Ted could finish the sentence, Muriel sitting next to him says, 'Oh come on Ted, you have a computer and you use it every day.' 'True enough' Ted replies, and adds that he plays computer games daily to keep his mind alert. At 95, Ted is Andamooka's oldest resident, and as it turns out he has also owned a computer for longer than anyone else in the room. In fact, Ted probably had a computer before most people in Australia. He bought his first one at a trade expo in Sydney in the 1980s – a very early adopter indeed. Yet, Ted doesn't see himself as computer literate or savvy about the Internet.

Tom's computer started to make strange whirring noises last year, and he decided to take it apart to see if he could fix it. When he got the main part of the computer open, he saw it had a fan; 'It looked like the radiator fan, and I could see the bearings were broken, so I went up to my shed and found one just like it. I put a drop of grease on it, closed the whole thing up, and now it works!' But when we talked Tom said, 'You know I am not the expert, I don't really understand this stuff.'

Are Ted and Tom just being modest or does being computer literate mean something different to them – perhaps it is not something to be celebrated? I have encountered a lot of Toms and Teds, people who were sophisticated users of new technology but all of whom, when asked, described themselves as novices. Perhaps we need to develop new ways for people to measure and articulate their technology prowess.

Don Greivson and Wendy Sullivan, Desktop Publishing Class
Milang Old School House and Community Centre
Photo: Genevieve Bell, February 2009

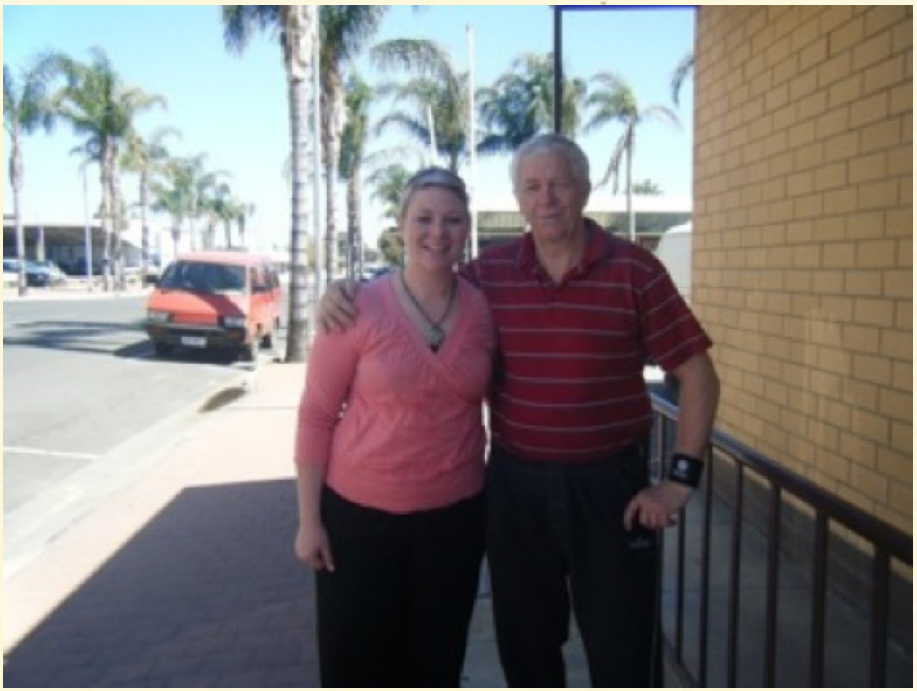
Playing catch-up

"There just hasn't been an ordered or structured process for learning how to use all the new technologies that have landed in our lives. Instead, there is a perpetual sense of being slightly behind ..."

The rapid adoption and proliferation of new technologies in our workplaces, homes and other centres of daily life mean that many of us feel like we are always playing catch-up. There just hasn't been an ordered or structured process for learning how to use all the new technologies that have landed in our lives. Instead, there is a perpetual sense of being slightly behind – this came up repeatedly in interviews, conversations and on SAstories.com. There was also a strong sense that being slightly behind also meant that you were losing out – you were not able to get connected or stay connected to essential services, community efforts or social relationships.

Government services like the Department of Further Education, Employment, Science and Technology's 'Outback Connect' offer one way of driving community engagement. Likewise the non-profit sector, including organisations like Connecting Up Australia, have sought to fill this gap. Grass roots community efforts are also at work to try to fill the gap. Adelaide Manley-Dunn started the Community IT Centre in Adelaide's Parks Community Centre in 2000 and she says 'it is wonderful to see people's worlds open up.' Her clientele is predominantly pensioners, Work for the Dole scheme applicants and young mums wanting to get back into the workforce. She fills her classes by word of mouth, and takes on her best students as teachers. At the Milang Old School House Community Centre, the MOSHCC for short, you can take computer classes and have access to printers and scanners – all for a gold coin donation.

Information and communication technology (ICT) classes, like those offered at Parks and the MOSHCC, seem to be very good models, with hands-on learning and personal tutoring. There is also a range of other successful small-scale learning environments around the state offering similar opportunities to learn. TAFE courses on Internet and computer use were considered valuable but not offered often enough, and price was repeatedly called out as an issue for pensioners.



Tess and Brian Depsey
Photo: Tess Depsey, August 2009

My Dad thinks I'm Google

"He doesn't need to have the Internet at home, because I am never more than a phone call away. If he wants to look something up, he just calls me and makes me do it for him."

Tess was a member of the Riverland A-Team that helped support this project. In her early 20s, she lives near her father, Brian. Tess jokes that her father has no need for a computer: 'My Dad thinks I am Google,' she says in one of our meetings. 'He doesn't need to have the Internet at home, because I am never more than a phone call away. If he wants to look something up, he just calls me and makes me do it for him.'

Tess' story isn't that unusual; for many older people there is a strong reliance on a younger generation for help – children and grandchildren provide various forms of formal and tacit technical support. Sometimes it goes one step further than just technical assistance: Tess' story hints at her role not just as technical support but also as technology interface. In fact, I was repeatedly struck by the many different ways people talked about getting connected; there isn't always a direct correlation between technology ownership and use. Accessing the Internet doesn't always require owning your own computer. Indeed, this is true in many other parts of the world.

For many South Australians, community centres, government and council buildings, commercial facilities, not-for-profit organisational hubs and public libraries all offered ways to get access to the Internet or even to get online. In much of regional South Australia, and indeed in the metropolitan areas too, libraries are important sites of connectivity to technology – libraries have computers and the Internet. And many librarians increasingly find themselves acting at the technology interface, providing assistance, coaching and education. Libraries are also important information and communication hubs with high degrees of trust and safety.

School, APY Lands
Photo: Katrina Jungnickel, March 2009

We haven't seen Rick in a while ...

"Yeah, this pile of laptops, we haven't had a chance to get them mapped to the server yet. We're waiting for Rick... The system just falls down when you pull that in... When Rick gets here, he'll fix it. This has been broken since last term... We haven't seen Rick in a while."

'Yeah, this pile of laptops, we haven't had a chance to get them mapped to the server yet. We're waiting for Rick... The system just falls down when you pull that in... When Rick gets here, he'll fix it. This has been broken since last term... We haven't seen Rick in a while.' Rick was responsible for servicing the technology in more than fifty schools north of Port Augusta, including those on the APY Lands. It was a monumental task, yet everywhere we went people spoke of him with respect and affection while they waited for him to come again!

It is staggering to imagine that so many schools and pupils have to rely on one person for assistance with what we know is far from robust technology! But for most of us, there is no Rick at all. Indeed, for consumers, students, public servants and businesses, access to reliable technology support is limited across much of South Australia. There are delays in installation, repair and maintenance because of distance, town size and cost structures. The Chief Executive of Koonibba in the state's far west recalled the six months it took to get a satellite dish installed and working: 'No one could do it all; they had to send out a different expert – I reckon we had four different blokes here before it was all done.'

Cost and access are ongoing barriers to the adoption of broadband in particular. One pensioner talked about the tradeoffs in expenditure she was making when she chose to stay connected through broadband. Getting and staying connected, it seems, is not a simple matter of pressing a button or choosing a service provider – it is an ongoing complex negotiation of resources, equipment, services and needs.

PY Ku Media Building, Indulkana
Photo: Katrina Jungnickel, March 2009

Unfinished business

"The problem with white fellas is they aren't interested in anything they can't put a ribbon around."

An Aboriginal Elder remarked to me, as we talked about this project, that new technologies weren't first and foremost on his mind. 'We have so much unfinished business – we have to think about reconciliation, and self-determination and what comes after 'the sorry'. And how we are going to develop our nation, and fix our problems.' He was clear about the ongoing challenges, struggles and opportunities in Aboriginal South Australia, and the adoption and use of new information and communication technologies were not the highest priority in his community.

For many Aboriginal people in South Australia, using new technologies means overcoming a range of different hurdles, such as access, cost, education levels. In some remote communities, new technologies have been installed but have not been accompanied by a meaningful commitment to capacity building, education and maintenance. Reflecting on this, another Elder laughed and said to me, 'The problem with white fellas is they aren't interested in anything they can't put a ribbon around.' For this Elder, the unwillingness of government departments at both federal and state levels to support services on an ongoing basis (including broadband connectivity) was a source of considerable frustration.

Not surprisingly then, Aboriginal communities in South Australia have some of the lowest rates of Internet connectivity in the state; this is true in urban, regional and remote Aboriginal populations. The APY Lands, for instance, have only 2% connectivity to homes. Massive infrastructure investment means there are new buildings everywhere, yet many are not being fully utilised. They sit empty for want of a broadband connection, a service call or a local maintenance team. Still, many Aboriginal communities around South Australia are finding ways to get connected: the Anangu Ku arts centres in the APY Lands have a robust online presence, and Nganampa Health offers one of Australia's first genuinely successful and effective electronic medical records systems. The Dieri and Ngarrindjeri nations have ambitious plans for connecting up communities across different regional centres and circumstances. However, the state and age of infrastructure, the absence of reliable services and support, cost and maintenance all negatively affect Aboriginal people's access to technology in South Australia.

Outskirts of Andamooka
Photo: Katrina Jungnickel, March 2009

North of Gepps Cross

"We had a passion for seeing what technology can do out in the bush and now Wudinna has gone from being low technology adopters to an area of really high users."

'Growing up in Adelaide in the 1950s, when you got to Grand Junction Road, you know, Gepps Cross, you knew you were on holidays. And you knew not to expect the same level of things that you had at home. Basically, everything just ended at Gepps Cross,' Jack tells me one day over coffee. This is a familiar story about the cultural geography of South Australia – some people also describe this as "the city-State" phenomenon where Adelaide is always the centre of everything. For better or worse, there is a strong sense that Gepps Cross is a bit like a kind of high water mark beyond which things just aren't quite the same. Of course, if you are on the other side of this dividing line, you see things a little differently. Many people I interviewed in regional South Australia felt like you were not taken seriously and that you were not always getting access to the same level of services, infrastructure and resources that were available to their counterparts in Adelaide. This was true if you were in southern or western South Australia as readily as it was if you were literally 'north of Gepps Cross.'

This has also meant that if you wanted to get things done, you often just did it yourself, and one of the really interesting dynamics at work in regional South Australia is the way that a few dedicated individuals can make a huge difference in small communities. At Wudinna, the local council and active community members have transformed a small shed into a flourishing telecentre that delivers Internet connectivity, Centrelink services and much more. Tim Scholz, current Council Chair said, 'We had a passion for seeing what technology can do out in the bush and now Wudinna has gone from being low technology adopters to an area of really high users.' At Camp Coorong, the Trevorrow family has developed an education and environmental learning centre, embraced digital story-telling, and created a new and meaningful hub for the Ngarrindjeri people. South Australians living outside the CBD have learnt a long time ago to 'make do' and to do it for themselves.

Local Papers
Photo: Genevieve Bell, December 2009

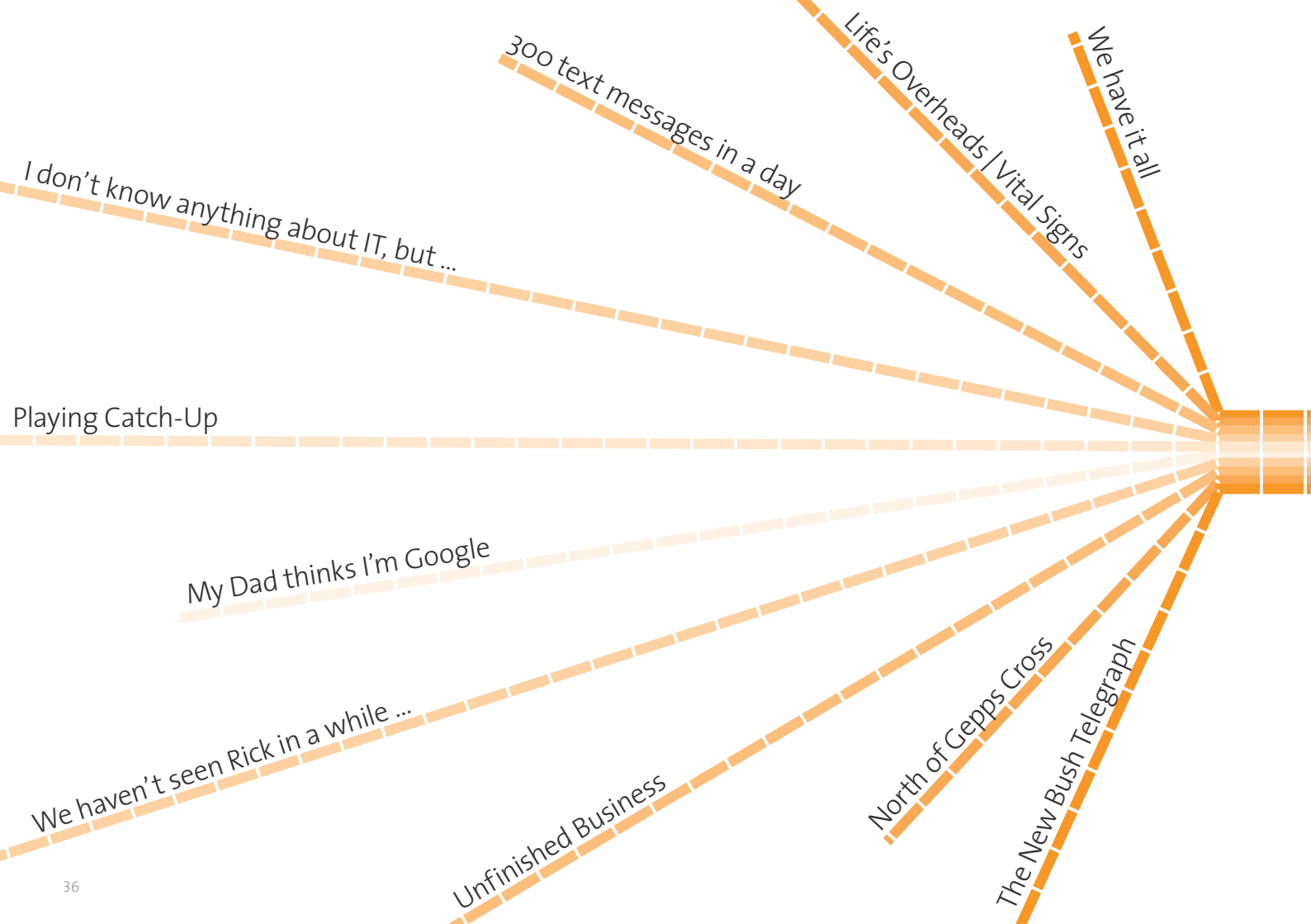
The new bush telegraph

"Information, entertainment, news and gossip continue to circulate very quickly in small towns and even in the big country town that is Adelaide."

Tina is a regular at the Dunes Café in Roxby Downs. She tells me, 'Everyone talks to each other on the phone, in the street and café and on Facebook. It's a bit like working in an office where people refer to extension numbers, the phone numbers in the town have been shortened to the last four digits because everyone knows that 8671 is the local number.' It would seem that the bush telegraph is alive, well and expanding. South Australians experience a significantly enhanced communicative ecology of mobile phones, PCs, Internet, radio, TV and newspapers (local, state and national). Information, entertainment, news and gossip continue to circulate very quickly in small towns and even in the big country town that is Adelaide.

South Australians, like others around the country, rely a great deal on their mobiles phones and they expressed a great deal of frustration at patchy coverage and poor customer service, especially in regional communities. Phones are an important way of staying in touch and staying connected. That said, the hot weather alert that appeared on South Australian phones during January 2009 was an interesting moment. People were ambivalent about how they felt about having the government communicate with them through their mobile phones – it was an unexpected way to hear from the government.

In addition to television, the Internet and mobile phones, regional papers and local radio were nearly always mentioned as an important part of daily life. Both provided a steady stream of relevant information and highly site-specific news – weddings, clearance sales, and sports scores.


300 text messages in a day
Life's Overheads | Vital Signs
We have it all
I don't know anything about IT, but ...
Playing Catch-Up
My Dad thinks I'm Google
We haven't seen Rick in a while ...
Unfinished Business
North of Gepps Cross
The New Bush Telegraph

MAKING THE FUTURE OURS

GETTING TO RECOMMENDATIONS

Whether it is a physics teacher teaching via video conferencing to the Peterborough High School, Nganampa Health's electronic record service operating in all the Aboriginal medical clinics in the APY Lands, a small business offering its products globally, or even families keeping in touch with relatives in other countries through services like Skype and Facebook, the new technologies are already making a difference in South Australia. In the future these new technologies will be vital or underwriting innovation, productivity and citizenship for all South Australians.

Clearly new technologies represent an important part of South Australia's future, so working out how to meaningfully engage all South Australians – to reduce the barriers and create opportunities – will be critical. Yet, responsibility for new technologies, devices, infrastructures, services, digital literacy and outcome evaluation is currently distributed across a range of South Australian portfolios, departments and organisational structures. There is no clear connection to federal initiatives, funding sources or departments. This limits the South Australian Government's ability to drive efficiencies, create a set of best practices and develop a shared understanding of the benefits and challenges. It will be necessary to articulate a whole-of-government approach to broadband and other new technologies as a driver for South Australia's digital economy.

Building on the stories of South Australians, I am calling for action in four areas:

Broadbanding the State – Infrastructure Development

Switching on the State – Capacity Building

Strong Communities – Community Engagement

South Australia's Future – Growth and Innovation

My recommendations are aimed at the South Australian and federal governments, private enterprise and the broader community. Their successful adoption will require cross-government co-operation, public–private partnerships, the engagement of the not-for-profit sector, and even state–federal alignments, as well as the willingness of South Australians to participate.

William Creek's public phone box
Photo: Katrina Jungnickel, March 2009

BROADBANDING THE STATE – INFRASTRUCTURE DEVELOPMENT

In April 2009, the Commonwealth Government launched its National Broadband Network (NBN). In so doing, it has moved broadband from the realm of discretionary technology to that of a desirable and accepted infrastructure. In South Australia, we have to think about high-speed Internet as an essential service or utility, akin to water, electricity and roads. What might this mean? It means, first and foremost, broadband would need to be reliable and affordable, and we would need to foster the development of a robust eco-system of maintenance and repair. It would also necessitate equity of access and delivery.

The increasing presence of new technologies in our lives, and those of our friends, families and communities, means that sustaining social connections increasingly relies on new technologies and thus on regular expenditure on personal ICT. However, we have a long way to go when it comes to reliable connectivity. Currently, connecting to the Internet or mobile telephony is still complicated, particularly in regional areas. Weather, and the distance from towers, towns and other points of infrastructure impact on connectivity. Cost is an issue, as is the availability of reliable services and servicing. In fact, getting connected involves more than the cost of a computer. It also includes things like the cost of electricity, insurance, air-conditioning, post-sale services and repair, connectivity contracts, and so on. Bandwidth issues – fast downloads but slow upload speeds – also affect our participation in the digital economy. All of these issues will require serious attention – from government, from industry, from universities, from the non-profit sector and from South Australia's citizens.

The bottom line here is simple: it isn't enough to get people connected; you have to help keep them connected too!

Recommendation 1:

Maximise National Broadband Network (NBN) outcomes for South Australia

The government must develop a coordinated and proactive advocacy strategy for South Australia to ensure that maximum benefits accrue to the state. The current NBN plans raise particular issues for regional South Australia. There are 94 towns smaller than 1000 people in South Australia and they fall outside the current NBN plans for fixed-line connectivity. For these smaller towns two options exist: wireless services such as WiMAX or mobile broadband; and satellite. Despite the claims made regarding new generation satellite, it remains an expensive service to access and maintain.

The Department of Further Education, Employment, Science and Technology's regional initiative 'Broadbanding Yorke Peninsula', which used wireless technology (WiMAX), demonstrates that it is not only feasible but is in fact economically viable to connect up an entire region without requiring satellite broadband.

Recommendation 2:

Resource and implement the South Australian Information Economy Agenda

Digital economy policy should be a fundamental and central platform for the South Australian Government to ensure that it capitalises on the $43 billion National Broadband Network investment. The Department of Further Education, Employment, Science and Technology's 'Information Economy Agenda 2009–2014: Delivering our Digital Future' was launched in July 2009. This policy document is a strong statement on the value of new technologies and should be taken as a blueprint for responding to, and building on, the NBN in South Australia. The South Australian Government should move to fund the three critical components of the Agenda: connectivity, capacity building and content.

Recommendation 3:

Develop a whole-of-government approach to technology

In an environment of constrained budgets, the government will need to be increasingly efficient in its management of resources, more nimble in its decision-making processes and more responsive to the needs of an increasingly diverse citizen base. There is a growing recognition in the South Australian public service that things need to change and that there is a role for new technology in effecting that change.

Recommendation 4:

Build a workforce of ICT maintenance personnel

State and federal government agencies need to work together to build a workforce trained to install, maintain and service new technologies. It will be especially important to equip regional South Australian communities, including regional and remote Aboriginal communities, to engage in capacity building to ensure reliable service personnel. It will be vital to engage South Australia's universities, vocational education training providers and the non-profit sector to help train and foster this new workforce.

Recommendation 5:

Keep South Australia's schools connected

As South Australian schools move to a student-centred learning model, the role for new technologies will increase. The South Australian Government, leveraging Commonwealth funding and initiatives, must invest to develop ICT network capacity for all schools. Providing all South Australian schools with reliable and consistent high-speed Internet connections is the first step. Ultimately, ICT capabilities will be a fundamental basis for South Australian education, including early childhood development. However, there is currently a deficit in infrastructure capacity and capability in South Australia's school system and students experience poor delivery of ICT services and support at schools. The government must remedy these shortfalls now, as well as investing for future capacity.

Koonibba Aboriginal Community Council
Chari-Lee Peel, Toni Edwards, Kimberley Edwards, Kevina Ware

SWITCHING ON THE STATE – CAPACITY BUILDING

South Australia currently lags behind all other mainland Australian states in the adoption and use of broadband. International competitiveness increasingly relies on an engagement in the information, knowledge and creative economies. The keys to greater productivity and innovation are increasingly through creative collaboration using the Internet. South Australian citizens should be able to access the Internet to work, play and connect with the world equally as well as other Australians. In South Australian schools, technology is often out of date and many schools are running old versions of programs and applications. This is similar in much of the public sector; indeed, many public servants appear to be making do with technology on their desks that the general public consigned to their sheds long ago. Technology provisioning, both in terms of hardware and software, is uneven and policies around access to various pieces of the Internet are, at best, inconsistent. It doesn't need to remain this way.

Since late 2008, the South Australian Government has been driving a series of discussions around the role of new technology and in so doing has demonstrated its willingness to respond to its citizens. These discussions became the basis upon which South Australia was able to engage with the Commonwealth's Web2.0 Taskforce in a way which demonstrated a greater level of maturity in thinking than other states. Direct engagement through initiatives such as Community Cabinet and Office for Youth A-Teams are important indicators of the South Australian Government's commitment to open government. So, too, is the establishment of a Cabinet Office-driven Community Engagement and e-democracy Taskforce, an across-government taskforce which has arisen partly as a result of this residency and will lead the government's thinking on community engagement, innovation and user-end involvement in policy, program and service delivery. However, there is more we can do.

Collaboration between all the stakeholders in South Australia's future will be necessary. Government, industry, academic and non-profit organisations, as well as citizens themselves, will all need to be engaged in order to ensure that South Australians are ready and able to take advantage of high-speed broadband and other new information and communication technology advances.

Recommendation 6:

Digital Literacy and Life-Long learning.

Attaining satisfactory levels of digital literacy in the community will be a long and complicated process. Arguably it is a life-long process. So what would a genuine digital literacy program look like? Well, it would be life-long; it would clearly have a place in schools, teaching basic skills but also critical thinking; it would also have a place in TAFE and universities, and it would have a place in other social institutions which have historically helped train our populations. It would also be predicated on equity of access for children and adults alike, regional and metropolitan. We will need to think carefully how ageing South Australians are not further disenfranchised from technology and technologists, who sometimes treat them as though they were disabled. This is particularly important with an ageing population who can be supplied with information and health monitoring via broadband.

A Skills Strategy for South Australia published 19 March 2008 requires the increase of e-learning (by TAFE) with a target to increase e-learning by 100% by 2011 when the national school curriculum will first appear. Against this backdrop, the South Australian Government should develop a policy framework on digital learning and include a set of principles that underpins all government-funded digital training programs. This framework must move beyond application- and device-specific training to a more holistic pedagogy that equips all citizens to successfully operate in an increasingly digital world.

Recommendation 7:

Make ‘Ask Just Once’ a model for government–citizen engagement

The ‘sa.gov.au’ website, created as a result of the government’s ‘Ask Just Once’ ICT strategy, aims to provide a single point for citizens to enquire about a service and its delivery. It is a prime example of how to deliver government services in a nimble and proactive way: the content is shaped by community needs and a clear understanding of citizen requests and points of interaction with government. It has also improved efficiency by helping citizens to use on-line, self-service and lower cost service delivery modes. This in turn allows front-line staff to focus their

attention to where they can add the most value. However, for this model to work, the government must remain attuned to changing citizen needs, requests and preferred models of interaction. An additional challenge in moving to an online engagement model is ensuring access in regional South Australia for those with limited forms of connectivity and access. Perhaps the local ICT industry and our universities should be challenged to develop new guidelines around user-interface, web design and information architecture to limit the use of style sheets, plugs-ins and other features that will slow connectivity.

Recommendation 8:

Empower the Public Service to deliver world-class service to citizens

As part of this residency I met with many people, some of whom were recipients of services and programs delivered, others worked to provide them. I was repeatedly struck by the ways in which public servants were poorly resourced, both in terms of access to the Internet (i.e. speeds, bandwidth) and also in terms of access to the latest generation of new information and communication technologies, services and applications. There is also a lack of consistency of access, usage policies, budget and risk management policies across government departments. The South Australian Government has an opportunity to reposition itself here, and should actively encourage innovation in online services and engagement and participate in the implementation of the recommendations of the Commonwealth Web2.0 Taskforce.

Dunes Café, Roxby Downs
Coffee Morning for Families Group
Photo: Katrina Jungnickel, March 2009

STRONG COMMUNITIES – COMMUNITY ENGAGEMENT

South Australian communities are vibrant centres – from small towns to metropolitan suburbs, there are myriad gathering places, interest groups, services and regular events that bring everyone together. Engaging South Australians, not just as individuals but as members of these different communities, is an important piece of the digital economy conversation.

In order to sustain strong, healthy, populated regions as called for in the South Australian Strategic Plan, we need to foster genuine regional centres. And if we believe that this is worth ensuring, then it is attendant on all stakeholders to ensure that this happens in ways that do not disadvantage regional people. This might mean questioning the current dominance of the city–state model with the Adelaide CBD as the hub. In fact, there is a strong desire for people to stay in their communities and regions, and there is already a marked government presence but no strong point of view or rationale for consolidation, and much of the power for decision making seems to remain in Adelaide.

In South Australia, the NBN could make possible stronger regional hubs that co-ordinate all levels of governmental activity. There is clearly a need for much stronger co-ordination of services and service delivery, and for communication in-region between agencies as well as communication intra-department with Adelaide. In fact, new information and communication technologies can play a powerful role in fostering vibrant community hubs. This could be particularly powerful for regional and remote South Australia, providing those communities with better educational, health, and government services options, as well as a wider array of economic opportunities. Broadband can facilitate much of this but will also require changes in policy.

Recommendation 9:

Digital citizenship for life

Much is made of the South Korean 'Broadband Miracle', and the statistics are impressive – more than 80% of households are already connected to a symmetrical high-speed Internet with a significant impact on national productivity, consumer culture and a general sense of well-being and engagement. However, South Korea's success lies not just in its technological accomplishments, but also its transformation of Korean citizens' attitudes towards the role of broadband in society. Through a series of well-funded, nationwide campaigns and initiatives the government linked the adoption of broadband in the home to ideas of good citizenship, progress and South Korea's future. To be a good South Korean citizen has meant having broadband to your home and making full use of it to participate in community life. A similar effort will be necessary in Australia if we are really going to see the National Broadband Network have the impact it should here in South Australia. Building on the 'Digital Literacy' charter, we need to create the idea of 'digital citizenship'.

Digital citizenship is underwritten by available, affordable and accessible broadband, but it means more than that. We need to shift the focus of conversation from cyber safety and a risk-mitigation orientation, to one that focuses on empowering everyone to operate safely, securely and freely. Internet for true digital citizenship will also mean an Internet that encourages community engagement, content production, innovation and sharing. We need an Internet environment in which South Australians can participate and create as readily as they can download and consume. To achieve such an Internet requires achieving a greater degree of symmetry between download and upload speeds. Current commercial providers are making decisions about what consumers need and want with a strong focus on downloads rather than greater participation. However, in addition to the increased ease of transaction, improved backhaul or upload times would encourage further participation, engagement and creativity.

Recommendation 10:

Invest in hubs beyond the home

Libraries, community centres and the like are the communication information heart of South Australian communities. These hubs meet all manner of different kinds of South Australian needs and service a range of different citizens, including some of the most underserved and at-risk members of the community. As such, they are ideal sites through which to provide public Internet access and services. Public access to the Internet helps ensure that the widest range of South Australians have somewhere to go to get connected. This is critical for young people, disengaged or at a high risk of disengaging from schooling or learning, who are being reconnected through the Innovative Community Access Networks (ICANs) and participate in education programs outside of (but still connected to and enrolled in) schools.

Recommendation 11:

Create a RiverHub in the Riverland

Access to metropolitan comparable services enabled by online communication technologies can help people stay in their towns and in their regions. The completion of the NBN will provide an important infrastructure upon which we can grow reliable and cost-competitive video-conferencing technology for health, education and government services. The A-Team I worked with in the Riverland recommended that a virtual hub (website) be created, implemented and maintained into the future, to provide a 'one stop shop' with a range of information and services to Riverland residents and those interested in visiting or working in the region. The A-Team members also recognised that NBN could help address the issue of health care. Access to health care and its cost are significant issues facing South Australia. In regional areas distance just makes things worse. The A-Team makes a strong case for a 'more productive and effective use of healthcare service provider time by delivering safer healthcare within the Riverland region.

Traegar Pedal Radio
Photo: Courtesy of the Royal Flying Doctor Service of Australia

SOUTH AUSTRALIA'S FUTURE – GROWTH AND INNOVATION

There is something distinctively Australian about our willingness to experiment with new technologies – to take things on and give them a whirl. As a result, many South Australian sheds bear witness to the things that didn't work out, but our ability to 'have a go' means we have led the world in the adoption of things like ATMs, VCRs, mobile phones, and even dial-up Internet; and we have the opportunity to do the same now by creating new ways of using technology and innovative new applications and services. There is a huge opportunity now to experiment with and develop new technologies and alternative forms of connectivity. The NBN, or something like it, will bring high-speed connectivity to most of South Australia, and indeed the nation, in the next five years. This creates a remarkable opportunity for innovation. Using Defence SA as a model, and building on the Department of the Premier and Cabinet's nascent 'Thinking Adelaide' plan, I would like to establish South Australia as a centre of excellence for a new broadbanded Australia. We could combine public and private sector forces into something quite remarkable here, but we must start now!

If South Australia wants to make the most of the benefits of the new digital age then we want to make South Australia a place where we ask critical questions about the nature of a digital economy society. 'How can everyday life be better for everyone?' is a good place to start exploring how the future might look. Solutions to the mundane and boring problems scale up to be the innovations of the future. These are not merely technological solutions: they will require new ways of thinking, given the new ways of being that are made possible by technology. Exploring future issues starts with a strong orientation to people's everyday lives and the boring problems – these will ultimately scale better than the exotic problems.

We have to start investing now because it will take several years to do the research, thinking creatively and innovatively about solutions, and to pilot and trial them in time for a fully functional National Broadband Network in 2013.

Recommendation 12:

Expand the Australian Centre for Social Innovation's charter

Previous Thinker in Residence Geoff Mulgan recommended the establishment of the Australian Centre for Social Innovation. This Centre is ideally placed to carry forward an innovation agenda around the digital economy.

Recommendation 13:

Implement a 'digital well-being Index'

Ultimately, this report advocates systemic change regarding the role and future of technology in South Australia's digital economy. The current review of South Australia's Strategic Plan provides an opportunity to rethink some of the ways we talk about and measure the impact of new technologies in the state. We need new forms of policy, regulation and stakeholder management, as well as new metrics and analytics for measuring progress and success. The success of ICT infrastructure deployments cannot be measured by the number of households connected or the linear metres of fibre laid. Instead I am calling for the development of a more sophisticated set of metrics.

A digital well-being index would provide a holistic approach to measuring the success of connectivity, as it would measure the intrinsic benefits of being connected and the positive impacts on individuals, business and society, not just quantifying the number of people who use broadband.

A CALL TO ACTION FOR ALL OF US!

This report grew out of the stories of South Australians. The recommendations in this report will not just happen by waiting for the government to develop and deliver the digital economy. I think the next steps will also be up to all of us. As citizens, I think we have to commit to finding ways to get or stay engaged with new technologies as they arrive in our state, our communities and our homes!

AN IMPLEMENTATION PLAN

South Australia has a real opportunity to harness the current national focus on the National Broadband Network to position itself for full participation in a high-speed broadband-enhanced environment. This report lays out a vision for what that participation could and should look like.

To achieve real success for South Australia in this new digital future requires participation not only from government, but also from industry, the not-for-profit sector, universities and the citizens of this state. Specifically, I have identified four areas of action:

Infrastructure Development

Capacity Building

Community Engagement

Growth and Innovation

Outlined below is an implementation plan which identifies a first set of actions, but they are just the start of a much broader transformation that is enabled through the smarter and more effective use of new technologies. This implementation plan is an invitation to all South Australian government departments, agencies and organisations, as well as public and private sector organisations and institutions to engage and help create new opportunities and possibilities. And whilst I have identified specific stakeholders, there is scope and opportunity for other stakeholders to actively participate.

Recommendation 1:

Maximise National Broadband Network (NBN) outcomes for South Australia

1.1 Drive a collaborative partnership with the Commonwealth Department of Broadband, Communications and the Digital Economy and NBN Co to ensure that South Australia doesn't lose further ground in the broadband connectivity stakes. Ensure that South Australia is a key pilot site for the '10 per cent solution' – the non-fibre to the premise solution for rural and regional Australia – with an explicit focus on non-satellite solutions. (Department of the Premier and Cabinet and Department of Further Education, Employment, Science and Technology must advocate strongly on behalf of South Australia with the newly formed NBN Co.)

1.2 Establish a Digital Economy Fund. This fund will focus on broadband development (i.e. broadband infrastructure, training, capacity building and content development), digital literacy, and further studies of specific usage models and drivers for high-speed Internet uptake in South Australia over the next five years. (Department of Further Education, Employment, Science and Technology)

1.3 Develop a model to build on the successes of Broadbanding Yorke Peninsula. This model should be applied to other key regions in South Australia, including the Riverland and Mid-North, to provide these regions with broadband connectivity, which could in turn revitalise telecentres and other community ICT nodes. (Department of Further Education, Employment, Science and Technology)

1.4 Facilitate Aboriginal communities throughout South Australia in developing new models and funding streams for appropriate ICT deployments in homes, community centers and other shared spaces to support and foster digitally engaged communities in both public and private spaces. (Department of Further Education, Employment, Science and Technology, and Department of the Premier and Cabinet's Aboriginal Affairs and Reconciliation Division)

Recommendation 2:

Resource and implement the South Australian Information Economy Agenda

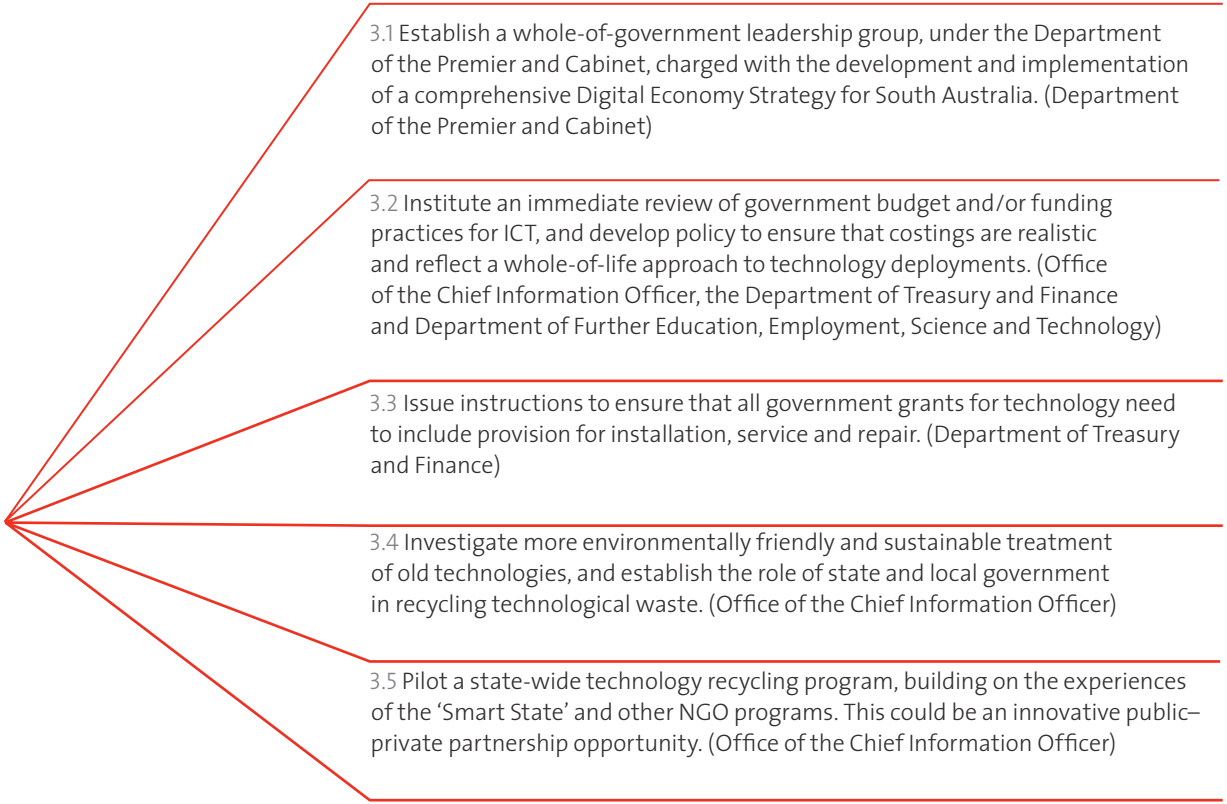
2.1 Support the ongoing development of a professional ICT skills base in South Australia, so that we become producers of innovative new content services and applications. (Department of Further Education, Employment, Science and Technology)

2.2 Commission a study to fully understand the use of technology by partially connected and fully disconnected South Australians, including a focus on the issues for South Australian Aboriginal communities. (Department of Further Education, Employment, Science and Technology)

2.3 Take South Australia's Information Economy Agenda to regional South Australia. Ensure that for 2010, all State Government Community Cabinets have a standing agenda item dedicated to reviewing local Information Economy activities, and uncover any barriers to ongoing success. (Department of the Premier and Cabinet, Department of Further Education, Employment, Science and Technology)

Recommendation 3:

Develop a whole-of-government approach to technology



3.1 Establish a whole-of-government leadership group, under the Department of the Premier and Cabinet, charged with the development and implementation of a comprehensive Digital Economy Strategy for South Australia. (Department of the Premier and Cabinet)

3.2 Institute an immediate review of government budget and/or funding practices for ICT, and develop policy to ensure that costings are realistic and reflect a whole-of-life approach to technology deployments. (Office of the Chief Information Officer, the Department of Treasury and Finance and Department of Further Education, Employment, Science and Technology)

3.3 Issue instructions to ensure that all government grants for technology need to include provision for installation, service and repair. (Department of Treasury and Finance)

3.4 Investigate more environmentally friendly and sustainable treatment of old technologies, and establish the role of state and local government in recycling technological waste. (Office of the Chief Information Officer)

3.5 Pilot a state-wide technology recycling program, building on the experiences of the 'Smart State' and other NGO programs. This could be an innovative public–private partnership opportunity. (Office of the Chief Information Officer)

3.6 Government to take responsibility for the recycling of its digital equipment, including computers and mobile phones. (Office of the Chief Information Officer)

Recommendation 4:

Build a workforce of ICT maintenance personnel

4.1 Provide basic ICT training to government service staff in regional centres. (Department of Further Education, Employment, Science and Technology and Department of Planning and Local Government)

4.2 Investigate and resource the use of remote manageability technology to avoid lengthy delays to service and repairs in regional areas where service is not easy to access. (Department of Planning and Local Government, Office of the Chief Information Officer)

4.3 Commission a study to better understand community technology groups, their key successes and current obstacles and challenges. Focus on lessons regarding how to put innovation and technology competency in everyone's hands. Identify where the opportunities exist for increased government support and engagement. (Department of Further Education, Employment, Science and Technology, Local Government Association, appropriate South Australian based NGOs and Department of Planning and Local Government)

4.4 Develop an Aboriginal ICT Corps for rural and remote Aboriginal communities. Work with key Aboriginal leaders to develop a plan for a targeted, well financed and stable ICT support capacity for Aboriginal communities. This plan should be implemented within 24 months. (Department of the Premier and Cabinet's Aboriginal Affairs and Reconciliation Division and Department of Further Education, Employment, Science and Technology)

Recommendation 5:

Keep South Australia's schools connected

5.1 Immediately review existing policy and funding levels for ICT support for administration and curriculum computer networks in all South Australian schools; this includes a thorough examination of the proposed Standard Information Architecture model. While the federally funded Digital Education Revolution will bring new resources to the state, current short-falls must also be addressed. This should include establishing targets that will increase the number of current computer support staff in metropolitan and regional South Australia, offering competitive salary packages, allowances and conditions that will attract and retain applicants. (Department of Education and Children's Services)

5.2 Move to address critical ICT support gaps in underserved rural and remote schools, including immediately filling the currently vacant ICT support position for APY Lands, as well as the recently vacated ICT support position servicing all schools north of Port Augusta. (Department of Education and Children's Services)

5.3 Upgrade enhanced teacher-to-child personal broadcast technology and interactive whiteboards in all schools serving rural and remote Aboriginal communities, including on the APY Lands. (Department of Education and Children's Services)

Recommendation 6:

Digital literacy and life-long learning

6.1 Develop a South Australian Digital Citizenship curriculum (for reception through to Year 12), aligned with the national curriculum currently in development and other relevant local and national initiatives. The South Australian Digital Citizenship curriculum should include critical conversations regarding information management, the application of intellectual property laws, data security, disclosure, risk and opportunities on line. This curriculum should augment traditional ICT classes in schools. This effort should be in place for the 2012 school year. (Department of Education and Children's Services)

6.2 Commission TAFEs to develop and implement a meaningful and affordable 'ICT for Life' course package for the vocational education and training (VET) sector. This package should be based on critical thinking and develop the capacity for innovation and should be completed within 24 months. Develop a suite of standardised ICT introduction training modules for teaching through TAFE, WEA and all other local community groups. (Department of Further Education, Employment, Science and Technology)

6.3 Utilise and further develop the state-wide network of technology access and learning nodes (all 183 libraries, 93 community houses and neighbourhood centres and adult entry high schools) to deliver a 10% increase in computer literacy by 2012 and 20% by 2014. (Department of Further Education, Employment, Science and Technology, Department for Families and Communities, Department of Education and Children's Services and Department of Planning and Local Government)

Recommendation 6:

Digital literacy and life-long learning

6.4 TAFEs to accelerate their move to e-curricula and greatly increase their use of technology for remote teaching and learning to broaden the curriculum offerings and hence life and employment opportunities for regional students. (Department of Further Education, Employment, Science and Technology)

6.5 Support Seniors organisations, service providers, the Office of Ageing and Council for Ageing (COTA) to offer training for older people to keep them included in society, so they might better access information and services as well as contribute to the community using online mechanisms. (Community health organisations)

6.6 Drive a review of South Australia's Strategic Plan through a digital economy lens. Implement a new target to increase digital literacy and lifelong engagement with technology in metropolitan and regional areas. (Department of Further Education, Employment, Science and Technology, Department for Families and Communities, Department of Education and Children's Services and Department of Planning and Local Government).

6.7 Work to identify the infrastructure requirements and value propositions to enable Aboriginal people throughout South Australia to embrace digital literacy. Build on the collaborative approaches already in use, including those between the Department of the Premier and Cabinet's Aboriginal Affairs and Reconciliation Division and local Aboriginal language groups, to facilitate the Aboriginal Heritage Field School Training, whereby the Aboriginal community is offered training on GPS (global positioning system) to log Aboriginal heritage sites and preserve and protect cultural heritage sites. (Department of the Premier and Cabinet's Aboriginal Affairs and Reconciliation Division, and the Department of Further Education, Employment, Science and Technology)

7.1 Develop and adopt a policy for online engagement, of which 'Ask Just Once' is a first step. This policy should include a set of guidelines to encourage the deployment and active use of the latest information and communication technologies within the Public Service. Further, this policy should enable engagement of citizens in the ongoing development of policy and guidelines. (Office of the Chief Information Officer, Department of the Premier and Cabinet)

7.2 Make the 'sa.gov.au' website more accessible in regional areas, developing a set of new guidelines around user-interface, web design and information architecture to limit the use of style sheets, plugs-ins and other features that will slow connectivity on satellite connections. (Office of the Chief Information Officer)

7.3 Explore options for the development of the 'sa.gov.au' website that provide a 'one stop shop' for Aboriginal people and communities. Such an initiative can play a significant role in relaying current policy information on Aboriginal affairs, in particular South Australia's Strategic Plan; information on relevant services and programs, governance and leadership arrangements, and funding opportunities to support communities. A single website can facilitate greater consideration for a wealth of information on and for Aboriginal South Australians, including languages, heritage, ethnography, digital archives, Aboriginal arts, virtual community gatherings to facilitate traditional cultural matters, and cultural resource management. (Department of the Premier and Cabinet's Aboriginal Affairs and Reconciliation Division)

Recommendation 7:

Make "Ask Just Once" a model for government/ citizen engagement

Recommendation 8:

Empower the Public Service to deliver world-class service to citizens

8.1 Establish a strong mandate for ensuring a consistent standard of technology provision and access policy across State Government departments and agencies to enable agencies to access information, and to empower collaboration across government and with the community. (Office of the Chief Information Officer, Department of the Premier and Cabinet)

8.2 Ensure that all levels of government – ministers, chief executives, senior decision makers – are aware of the potential for new technology and receive regular training and updates. (Department of the Premier and Cabinet)

8.3 Evaluate and set minimum standards and guidelines on technology expenditure and access to online services across government, with a view to opening up agencies to embrace innovation and information, and with reference to the Cabinet Office Community Engagement e-democracy Taskforce. Evaluate all ICT and online access policies across government. (Department of the Premier and Cabinet, Office of the Chief Information Officer)

Recommendation 9:

Digital citizenship for Life

9.1 Under the newly established Digital Economy Fund, and recognising the rise of user generated content and a growing desire to participate in online experiences, funding for infrastructure should give preference to service providers who provide internet service plans that offer greater symmetry between download and upload. (Department of Further Education, Employment, Science and Technology)

9.2 Work with federal regulatory bodies to encourage ISPs and relevant Telcos to create symmetrical service offerings – moving from the current 5:1 ratio, to closer to 2:1. (Australian Communication and Media Authority)

9.3 Ensure that all government websites are designed or enhanced to support accessibility, participation and interaction with the community, through Cabinet Office's e-democracy and community engagement initiative. (Department of the Premier and Cabinet)

9.4 In partnership with the Commonwealth Government, the South Australian Government should undertake a public education campaign to increase awareness of high-speed broadband, its transformative potential and its uniquely Australian appeal. This campaign should address the basic issues: what will the consequences of high-speed connectivity be for citizens and businesses. The not-for-profit sector would also be valuable partners in this endeavour. (Department of the Premier and Cabinet, Commonwealth Department of Broadband, Communications and the Digital Economy)

Recommendation 10:

Invest in hubs beyond the home

10.1 Ensure that the state-wide network of technology access and learning nodes (all 183 libraries, 93 community houses and neighbourhood centres and adult entry high schools) has an increased focus on ICT capability and connectively to support non-home, non-work connectivity. Achieving access, in terms both of system design and of content and availability, is critical. Provide professional development training for librarians and other community centre staff to enable them to work with communities to participate as well as consume in an online environment. (Public Libraries, Social Inclusion Board, Department of the Premier and Cabinet, Arts SA)

10.2 Ensure that government information is made accessible to young people and is provided in a clear format. This might include integration of content (i.e. mashups) or mobile applications. Further, identify and promote youth-friendly sites for connectivity beyond home, with on-site support available. (Office for Youth, Office of the Chief Information Officer and Service SA)

10.3 As part of the Digital Economy Fund, commit to growing capacity in local communities. (Department of Further Education, Employment, Science and Technology, Office of Small Business and Regional Development, Department of Trade and Economic Development)

Recommendation 10:

Invest in hubs beyond the home

10.4 Further explore ways to enhance libraries and communication centres as information and knowledge hubs for Aboriginal people. This will serve to build the capacity of Aboriginal people. It will also assist Aboriginal people to become the leaders in knowledge and communication hubs and to develop IT literacy. Clearly local governments have a role to play in increasing IT infrastructure availability for local communities within their areas. Initiatives could also focus on ways to enhance their attractiveness to the local Aboriginal community, to be user-friendlier. (Department of the Premier and Cabinet's Aboriginal Affairs and Reconciliation Division)

10.5 Develop a model with criteria for identifying location nodes and key individuals in small communities who can be trained to act as regional champions and to bring information management skills and strategic thinking about ICT into the regional area. This model should determine key attributes and competencies for such individuals. (Regional Development boards, Office of Small Business and Regional Development, Department of Trade and Economic Development; local governments, Adult Community Education, Department of Further Education, Employment, Science and Technology)

Recommendation 11:

Create a RiverHub in the Riverland

11.1 Create, implement and maintain a 'virtual hub' (website) to provide a 'one stop shop' with a range of information and services to Riverland residents and those interested in visiting or working in the region. (Department of Further Education, Employment, Science and Technology, Department of Planning and Local Government, Office of the Chief Information Officer)

11.2 Develop a physical 'hub' (open beyond current library hours) in a centralised place within the Riverland region, showcasing what cutting edge technology can do and how it can be used, creating motivation and momentum for change. (Department of Further Education, Employment, Science and Technology, Department of Planning and Local Government)

11.3 It is recognised that there is a lot of work being carried out in the national space regarding electronic health records; however, investigations of local Riverland health care revealed that there was capacity to proceed ahead of the national time frame. Implement in the Riverland a user-friendly pilot 'Individual Electronic Health Record' for all private and public healthcare service providers. Include the function for all private and public healthcare providers to use an SMS service to remind patients of appointments. (SA Health)

Recommendation 12:

Expand the Australian Centre for Social Innovation's charter

12.1 Immediately move to appoint a board member with an explicit digital economy focus. (Department of the Premier and Cabinet)

12.2 The Australian Centre of Social Innovation will adopt a blueprint for exploring South Australia's digital future, including five areas, or vectors, that are most significant and critical to the future of the state. These vectors (listed below) all build on the National Broadband Network as a foundational utility. (Centre for Social Innovation, operating in partnership with Department of the Premier and Cabinet, Department of Further Education, Employment, Science and Technology and all South Australian universities)

- *Environmentalism and Sustainability. Key areas of focus: water, energy use, and waste management*
- *New community development. Key areas of focus: urbanism, new community planning, transportation (including traffic grids)*
- *Health Care and Ageing. Key areas of focus: electronic medical record systems, digital medical imaging, ageing-in-place technology, remote diagnosis and treatment*
- *Citizenship 2.0. Key areas of focus: new forms of participation, engagement, resistance and disengagement, civic society*
- *Regulating the Digital Economy. Key areas of focus: content regulation, access and equity, cross-platform policy.*

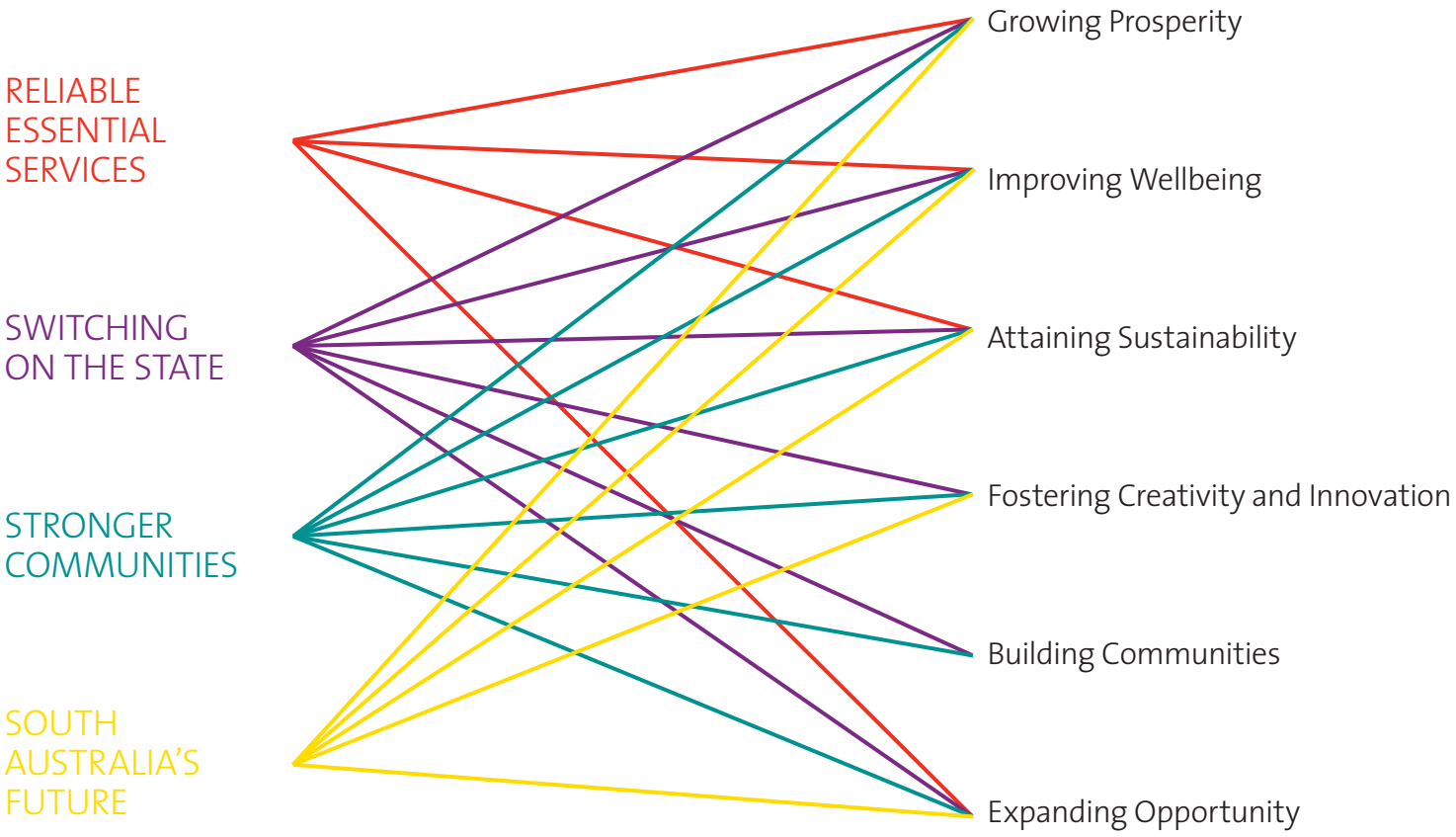
Recommendation 13:

Implement a 'digital well-being index'.

13.1 In order to measure South Australia's progress in the digital economy, it will be necessary to track changes in feelings of connectedness, engagement and participation, diminishing levels of frustration, as well as the more traditional things like productivity gains and efficiency. (Department of Further Education, Employment, Science and Technology, South Australia's universities, the Commonwealth Department of Broadband, Communications and the Digital Economy, and Australian Communication and Media Authorities)

13.2 Include a year-on-year increase in the digital well-being index as a new target for South Australia's Strategic Plan. (Department of Further Education, Employment, Science and Technology)

ALIGNING TO SOUTH AUSTRALIA'S STRATEGIC PLAN



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Designed by Damien Pyne & Stevie Summers
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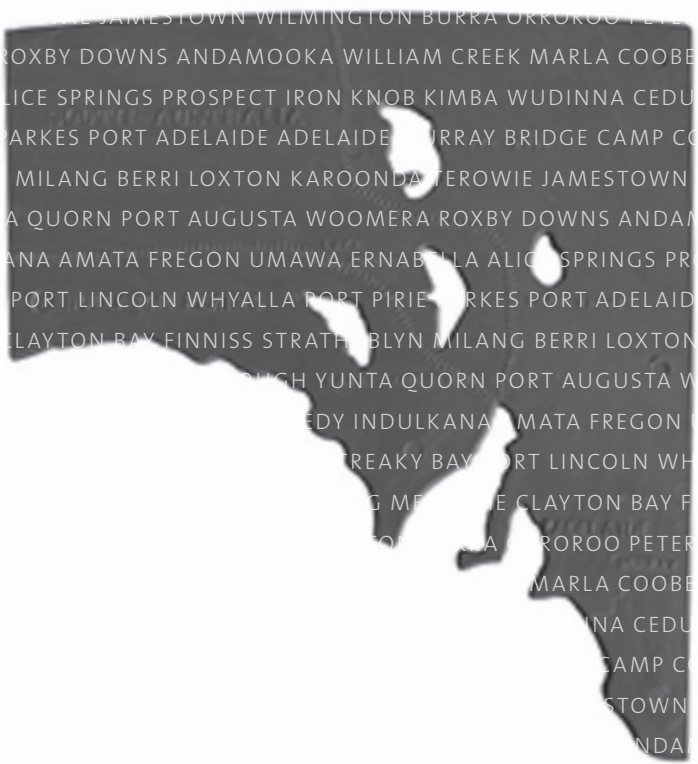

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