

South Australia **Connected** *Ready for the Future*

A position paper proposing a strategic approach to Information and Communications Technologies across the South Australian Government.





Serving People

Serving People is what we do.

Securing Resilience

Government has a special role in protecting South Australians, so **Securing Resilience** underpins everything we do.

Improving Delivery

We are **Improving Delivery**, getting more out of what we've got.

Working Together

Where we have common problems, **Working Together**, we will create and share solutions.

Innovating Now

We have a sense of urgency, and we know that risk taking will be rewarded, so we are **Innovating Now**.

Connecting South Australians

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Foreword

South Australia's future prosperity relies on being inventive and looking to do new things, in new ways. This is at the heart of who we are. We have always been innovators.

Information and Communications Technology [ICT] is a key enabler of innovation. It allows us to do new things. We also need to be open to using it in new ways.

A new culture of innovation in South Australia is one of the key themes of the *Economic Statement* I recently released. The *Economic Statement* sets out where our economy is at, and looks at where it might go in the future. It is my plan for the economic future of the State.

The *Economic Statement* also outlines how South Australia's future prosperity will rely upon a partnership of strong government, working with strong business, with a strong community behind us.

This is particularly the case with the ICT sector – and this position paper, *SA Connected*, seeks to build on our legacy of innovation in the private and public sectors. It proposes an aggressive agenda to help ensure that South Australia is connected, ready for the future – and it carries significant implications for all of us.

SA Connected is being released for consultation in partnership with the Australian Information Industry Association and it outlines the ways we intend to embed a culture of working together, both in and outside of government.

But we want to go further. We want to embed a new culture of innovation between government agencies, and between government and industry. Using and improving technology allows us to break down barriers that have previously prevented us finding shared solutions to common problems. To improve our ability to innovate, we will work more closely with industry to develop a practical and sensible framework for introducing new technologies into government.

Increasingly, we recognise that the public sector is more than just a collection of departments and agencies. It is a complicated, dynamic and interconnected network of highly-committed individuals and organisations, all working together to make South Australia a better place to live.

This is why I have challenged the public sector to innovate, in particular through the Public Sector Renewal Program. I see the public sector as an asset to be realised, not a burden to be minimised, and through a series of ninety-day projects we are seeking to deliver on this. Many of these projects will harness new and innovative technologies.

It is no secret however, that governments the world over are grappling with an environment in which savings need to be made, while at the same time there is an ever-increasing demand for services and information. South Australia is not immune from these pressures. That is why we need to respond with a comprehensive, strategic approach for the use of ICT to ensure that we are connected and always innovating, so that the best possible service can be provided to all South Australians.

We will work with communities and individuals, co-designing services and removing barriers to access. We will do this by improving our productivity, fostering innovation, and focusing on customer service.

The work already done in partnership with the Australian Information Industry Association to develop *SA Connected* for discussion will be extended to the wider community for consultation, before the strategy takes its final form.

SA Connected is available on the Your SAY website so that the people who rely upon government services can tell us of their needs, ideas and expectations so that we have a clear understanding of their views when it comes to ICT issues. I encourage everyone to help promote this important discussion at: www.yoursay.sa.gov.au/saconnected.

Following this consultation, the themes in *SA Connected* will be incorporated into the government's next ICT strategy. I expect that agencies will address the themes in *SA Connected*, using them to drive their ICT planning. I also ask every Chief Executive to consider, in depth, how they will respond to the final version of the strategy when launched.

Hon Jay Weatherill MP

PREMIER

MINISTER FOR THE PUBLIC SECTOR

Teaching in 2030 isn't just about education, it's also about connection.

**In 2030
we do things
smarter. We
have to.**

I'm Paula Davies, a teacher working in South Australia in 2030. I teach because I love to work with kids. I like to think that I'm helping them to discover their personal strengths.

Today I had a class of 14 seven year olds. Ten were with me in real space and four were here in virtual space. We've been exploring magnetism, and while several of the girls were assembling a super conductor, the boys were excitedly video-chatting with a couple of lunar scientists on NASA's moon base. I didn't set the lesson, they did. They decided the tasks, they chose the tools, they made the connections.

In fact it wasn't even just me working with them. Two dads and a mum were here too, and I suspect quite a few more were popping in from time to time on the video-stream to see what we were up to. Education isn't something that's

done to kids anymore, it's a life-long journey of discovery that's supported by instant access to practically anything or anyone through commonplace technologies. And because of technology, school is a journey for the whole family.

Tomorrow I'm expecting a very full room, with everyone excited about attending in person. Katie's grandpa Joe will be here to talk to us about life as a seven year old in 1973, and the kind of technology they had back in the day. He's even promised to bring in an old-time keyboard and mouse for us to play with.

Teaching in 2030 is partly about education, but it's mostly about connection.

Introduction

Most of us aren't interested in technology for its own sake; we generally just care about what it can do for us. Information and Communications Technologies [ICT] amplify our ability to connect. That is why we love them, that is why we crave newer, faster, and smarter technologies – because they connect us with the things we want and need.

We connect in order to trade, to learn, and to keep in touch. In brief, to be connected is to be human. Humans are insatiably social, because we know that in all things, we are better together than apart. This is why we are always building more roads, trains, ships and planes, and infrastructure like the fibre optical cables that circle the globe many times over. We do all of these things to be connected. Our connections are what matter to us. Whether we are at the coffee shop linking up to the libraries of the world, or connecting with a friend half a world away, we can now connect in ways that were unimaginable just a decade ago.

For a long time, the human experience could only be shared in person – either one-to-one, or in small groups. Writing amplified and extended our reach – we could leave traces of ourselves and share messages without having to be there, but handmade manuscripts took time to make and were expensive. Ever since Gutenberg invented the printing press, we have been able to break information down into bite-size chunks, replicate them easily and move them around relatively inexpensively. Moveable type made printing a practical vector for one-to-many communications. But now, we can have new kinds of digital conversations, that are many-to-many, in parallel, and in real time.

There are many kinds of connections that *only* governments can make; there are some connections that governments can enable and improve; and there are our own personal connections. Often with this last category we just want governments to stay out of the way. But whether we are connecting a pensioner with a concession, a sick person with medical care, or a car-owner with a self-serve registration renewal, this is how we serve, by connecting South Australians with what they want and need, when they need it. We serve our community better when we understand how these connections work, and when we apply our understanding in order to improve, to streamline, simplify, and accelerate services. Improving connections is about getting rid of bottlenecks and other places where the connection gets interrupted or slowed down. For example, improving a connection might be as simple as putting a form on-line, in a mobile-ready format, so that citizens can more easily and quickly get to the service they need.

Another new kind of connection is an operator remotely-controlling mining equipment, sometimes while operator and machinery are hundreds of kilometres apart. Cars and trucks will soon connect with the roads that carry them, so that intelligent transport systems can make travelling safer and more efficient. Government has a role to play in enabling and supporting these kinds of connections too, because they give us economic and other advantages.

If we accept the proposition that connecting is the point, and that ICT amplifies and extends our ability to connect, then what should we, as a State Government, do about it?

This position paper tries to address this question. It sets out a forward-looking agenda to help guide the Government of South Australia as we all work to grapple with the challenges and opportunities of the information age. It has been designed to provoke discussion and dialogue across government, and after a period of consultation (and when a broad consensus is reached) a final version will be drafted for consideration by Cabinet. Everyone with a stake in the future of our government should take a moment to consider this position paper.

While the government's previous strategy, *Ask Just Once*, accomplished much, we want the next strategy to go further – we want it to have even more of an impact. We want to see a change in the way in which we invest in technology. Therefore, we expect to see agencies developing and implementing ICT plans that deliver the kinds of outcomes canvassed in this position paper. Agencies will also help develop new 'rules' for using ICT in government, and agencies will then be held to account for complying with those rules.

We cannot know, with any certainty, what future challenges and opportunities await us. The story of human progress does tell us one important fact though – the number, capacity and richness of our connections will continue to increase over time. We already live in a hyper-connected world. We are already doing much to connect South Australians, and in many ways we already lead the world in forging connections. Thanks to modern technology and connectivity, it doesn't really matter anymore where you live – but thank goodness we live here in South Australia, where we are connected, ready for the future.

Jim Hallion

CHIEF EXECUTIVE

DEPARTMENT OF THE PREMIER AND CABINET

**In 2030,
transportation
isn't just about
getting from A to B,
it's also about
strong connections.
Our connections
keep us safe.**



**In 2030
our transport
systems are
almost as
smart as we
are.**

I'm Lisa Woods, Executive Director of South Australia's Transport Networks in 2030, and I'm in one of the most exciting jobs in government. My department is responsible for all public transport, including buses, trains, and trams. But my job isn't just about getting people and things from A to B, it's also about being connected.

This morning on the way into work, I was thinking about the foresight that must have gone into the decisions made back in 2015 for our State to lead the nation in smart road technology. Things like driverless cars (or 'pods' as we now call them) would have been terrifying then. Now we take them for granted because they are so fast, safe and efficient, but back then it was like the appearance of horseless carriages all over again.

My husband Leigh, who was in the pod with me at the time, looked up from his vidscreen. He pointed out that our pod was taking us in the wrong direction, away from the city. At this rate, he complained, he'd be late for the only face-to-face day that his team have scheduled this month.

But I could just smile, because I knew that our pod was part of a huge public/private transport system and was being guided by tens of thousands of connections – to all the other road users, the mass transits, the autonomous road trains, and our traffic infrastructure. The pod knew exactly how to get us around any delay.

As it turned out, a gas main had ruptured several kilometres ahead, but instead of chaos and delays, the commuter traffic continued to flow smoothly, and emergency crews had no problems getting to the scene.

It's exciting being at the centre of such a vast web of connections, with so many people depending on us for their safety. I wonder if they realise just how much we depend on them too. Because in 2030, it's our connections that keep us safe.

Where are we now?

The following list is just a small sample of ICT-enabled transformations delivering great value to South Australians.

	Already here	On the way
	<p>SA.gov.au – the multi-award winning common Internet site for government was designed in consultation with citizens to provide a single entry point for government information and services.</p> <p>EzyReg – allows customers to renew their motor vehicle registration via a secure, on-line payment system on a desktop or smartphone. In 2011/12 almost 300 000 renewals were performed on-line, resulting in approximately \$550 000 in staff savings.</p>	<p>Real-time Adelaide Metro information – In early 2013, real-time passenger information will be progressively provided to Adelaide Metro customers via a broad range of channels (including desktop browsers and smartphone apps), letting users know when a bus, tram or train is expected to arrive at their stop.</p>
	<p>Information Technology Security Advisers [ITSAs] – agencies have established ITSAs to provide professional support and advice to senior management on the security measures required to protect information, in compliance with the government's <i>Information Security Management Framework</i>.</p>	<p>Ambulance Mobile Connect SA – rolling out high-speed connectivity to all ambulance vehicles in South Australia, providing real-time access to incident details and critical patient data – improving inter-agency mobilisation and communication during emergency situations.</p>
	<p>StateNet – a single, whole-of-government integrated voice and data network. Delivering data connectivity of around 40 Terabytes per month, and supporting around 35 000 voice service connections.</p> <p>ECO – Electronic Cabinet On-line allows all agencies to access Cabinet documents in a secure, paperless, auditable and accountable environment.</p>	<p>CareConnect – SA Health's strategy (formerly known as CareConnect) to develop a State-wide electronic health record that will, over time, connect citizen health records at all public hospitals, health professionals and health services.</p> <p>Project: Accountability – a series of structured and challenging dialogues for members of the South Australian Executive Service, designed to make every executive aware of their accountabilities in delivering projects.</p>
	<p>SAGEMS – the South Australian Government Electronic Messaging Service is the largest single government messaging deployment in the Southern Hemisphere, providing over 75 000 mailboxes across all government agencies.</p> <p>Spatial Cluster – the Resource and Infrastructure ICT Cluster involves multiple agencies working together to share, amongst other things, mapping data – providing a central, efficient and authoritative source of address and location information.</p>	<p>StateLink – an internal service that provides enterprise instant messaging, desktop videoconferencing, user presence (status), on-line meeting spaces, and desktop and application sharing. Currently, approximately 1800 people across ten agencies are using StateLink in their everyday business; this number grows steadily every month.</p>
	<p>PACE – the Plan for Accelerating Exploration promotes and supports substantial growth in mining exploration activity across the State by providing companies with geo-scientific data held by government for free or at cost. The economic benefit is estimated to be between \$800 million and \$1.5 billion per year.</p>	<p>Family Community Events Calendar – this pilot project provides timely, mobile device-specific, and targeted information, including services, campaigns and surveys to families around the City of Tea Tree Gully and northern region school cluster, allowing co-design of information services.</p>

What will change?

These are directional statements. They show, in overview, the direction(s) that will be embedded in the coming strategy.

		From	To
	What we do – <i>an external lens</i>	Some services on-line	→ Digital by default
		Some engagement	→ Collaborative democracy
		Ownership	→ Custodianship
		Customer service	→ Integrated customer service
		Treating everyone the same	→ Serving diversity
	Preparing for the unpredictable, but inevitable – <i>a security lens</i>	Robust infrastructure	→ Resilient communities
		Basic security awareness	→ We all apply security, all the time
		Protecting the perimeter	→ Protecting information
		Security as a part-time job	→ Professionalising security
	Getting more out of what we've got – <i>the productivity lens</i>	Some big ICT projects	→ Big plans, small projects
		Robust ICT governance	→ Integrated governance
		Buying software/hardware	→ Buying services
		Diffused accountability	→ Clear project accountability
	Common problems, shared solutions – <i>sharing and collaboration, another internal lens</i>	Barriers to collaboration	→ Seamless government
		Agencies competing	→ Share first
		Common problems	→ Shared solutions
	Risk-taking is rewarded – <i>an opportunity lens</i>	Risk averse	→ Risk managed
		Big monolithic projects	→ Rapid prototyping
		Technology driven	→ Multi-disciplinary concept design
		Good deeds done in secret	→ Open innovation

Overview

What is the purpose of this paper?

It might help to think of this as a 'green paper'. Green papers are used as part of a consultation process to set out a proposed agenda – in this case, a strategic across-government agenda for the use of ICT. It outlines a number of positions or directions that deserve our serious consideration. The purpose of this paper is to set out some positions of apparent consensus, in order to test whether the scope, areas of emphasis and overall positioning resonate across government. A final version of the strategy will be published following further consultation.

How is this paper structured?

This paper addresses the theme of connecting through five perspectives:



Serving People

This is our purpose, it is *'What we do'*. This perspective focuses on services to citizens.



Securing Resilience

We live in a changing world, we are *'Preparing for the unpredictable, but inevitable'*.



Improving Delivery

This provides a lens on our productivity and project execution, this is about *'Getting more out of what we've got'*.



Working Together

'Common problems, shared solutions'. This is our internal perspective. Collaboration and sharing makes us better at what we do.



Innovating Now

We have a sense of urgency, and we know that *'Risk taking will be rewarded'*.

The idea is that we will have an active, dynamic, and living strategy – to provide the South Australian Government with the agility it will need to respond to future challenges. Some of the projects and initiatives identified herein are already being implemented, some are just conceptual and may or may not be supported. They are all just examples, or illustrations of the kinds of things that the final strategy is meant to deliver. There are probably other, perhaps even better, examples out there. The final version of the strategy will be more definitive; this paper is for discussion.

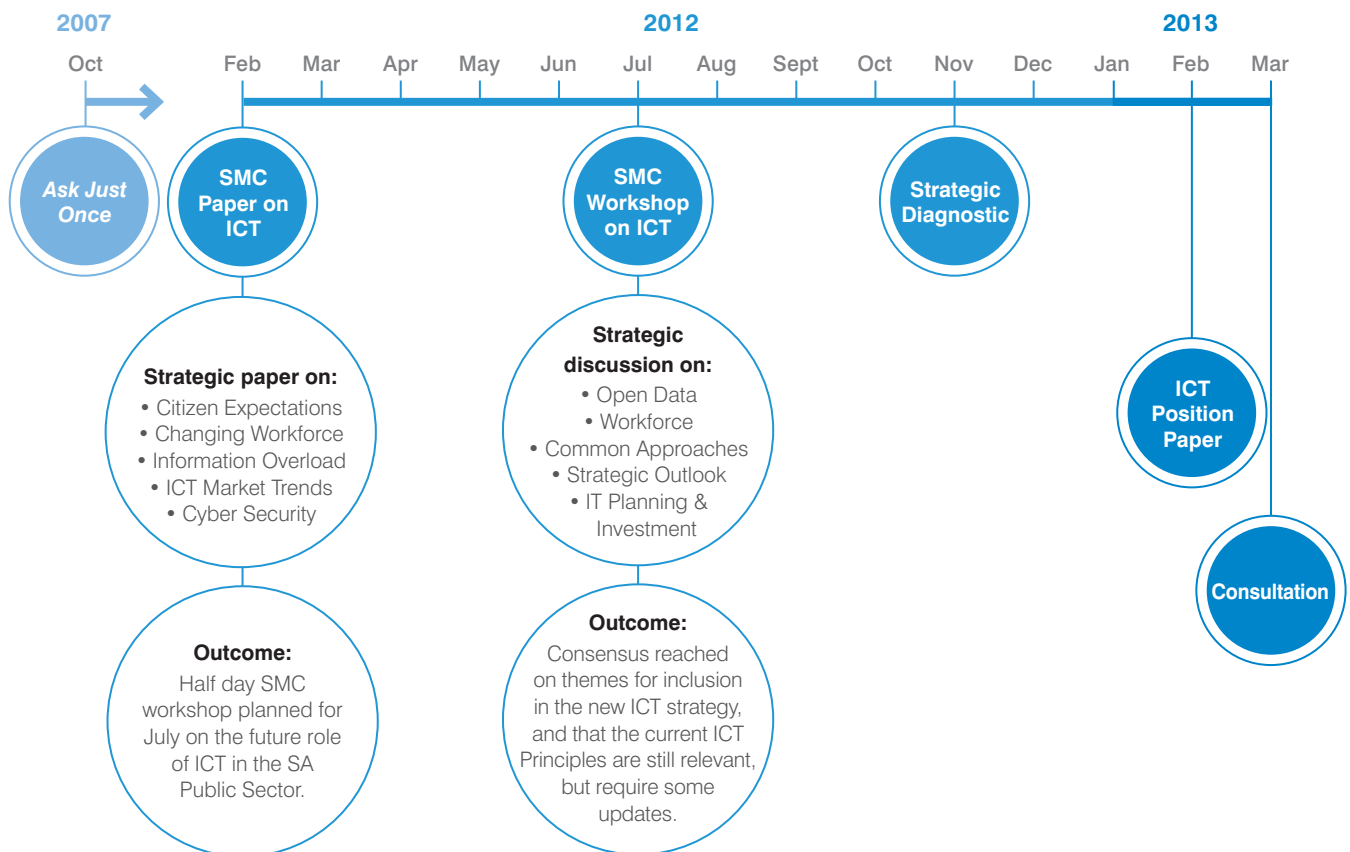
There are some 'From → To' statements in this paper. These statements are meant to paint a picture of the expected changes resulting from the coming strategy.

Why these five perspectives?

Think of the five perspectives outlined in this paper as simple 'lenses' on the complex, interconnected ecosystem of technologies, processes and people that we call 'government'. They are just one way of looking at all the complexity. Government is not only complex, it is constantly changing. So is technology. There is no 'right' way to categorise the issues; there is no universal taxonomy, the whole thing is just too big, complex and dynamic. The five perspectives are just that – perspectives, offering one way to see some clarity through the complexity, and by providing a bit of clarity, they offer us a means to focus our energies.

There are an almost infinite number of challenges facing us, and there are just as many potential solutions. This paper identifies preferred directions, and as such, it does not canvass every possible alternative. Extensive analysis has been conducted to work through and identify the key challenges and opportunities to distil them for this paper.

Background



Provenance

Throughout 2012, the Office of the Chief Information Officer, [CIO] has led a strategic dialogue around all things ICT as they relate to our State Government. The dialogue started with a bit of awareness-raising through a paper to the Senior Management Council [SMC]. That led to a series of workshops led by Chief Executives, designed to work through the issues, trade-offs, risks, and opportunities associated with technology.

We are now coming to the point of resolution of these matters, in order to set out a strategic agenda for the use of ICT across the South Australian Government.

If you would like to participate in the consultation for the next across-government ICT strategy, please provide feedback via: www.yoursay.sa.gov.au/saconnected or contact the Office of CIO via: CIOAdministrator@sa.gov.au.

Why bother with an across-government ICT strategy?

The need for an across-government ICT strategy is arguable. Every agency is dealing with different circumstances. There are myriad business models, and agencies have different customer needs, resourcing and technical issues. Carving out a strategy that is meaningful and impactful right across the public sector would appear, at first glance, to be an almost pointless task. That is, unless we identify and focus on what we have in common. Although the sector is broad and diverse, there are points of intersection – where there are common problems, we will find ways to share solutions.

And there is much we have in common. The same young person in our community could well be a 'customer' of not only the State's education system, but they may well also be a customer of justice, family welfare and other support systems. We use many of the same basic technologies across government, including email, networking and other services and infrastructure. As with all things, we are better when we are working together, hence this position paper is proposing an agenda to help get this State ready for the future, by taking a strategic, across-government view.

The Strategy

How will the strategy look and work?

The intention is to openly publish the strategy, both as a draft and when finalised, on SA.gov.au. The web pages for the strategy will include links, maintained by agencies, to all* agency standards, policies, planned/active/archived projects, and progress reports. The State CIO will also publish across-government materials for easy access. In this way, the strategy will be kept 'living' throughout its lifecycle. There will be links to approval and exemption work-flows, research materials, and a library of resource materials such as past/current business cases. The concept is to link together everything agencies need, to ensure that they not only have access to the 'rules' they are expected to follow, but the tools they need to do their work more effectively.

While the broad aspirations and principles in the strategy will change slowly and not often, the activities designed to implement the strategy will necessarily be dynamic and constantly changing. Visibility of these activities across the sector will support across-government sharing. The CIO will work in consultation with agencies to design and implement the web presence for the strategy.

Using the government's *High Performance Framework*, agencies will self-assess their maturity and capability to deliver against the strategy. When areas for improvement are identified, the CIO and the Department of Treasury and Finance will provide support to improve capabilities. If an agency habitually fails to meet maturity and capability expectations, specific interventions may be undertaken.


**When we say 'all' in this context, there are caveats. There will always be information redacted for legitimate commercial, privacy, security, or other public interest reasons.*

What kind of strategy is being proposed?

Agencies don't want to be fettered by unnecessary controls and bureaucracy developed around an ICT strategy. Rightly, agencies want to be allowed to just get on with delivering services; but they do need to have easy access and a clear understanding of the rules that are meant to guide their decision-making. The proposal here is to set out a strategy that clearly states the government's broad aspirations as well as the target areas on which agencies should focus. The final strategy will also define the principles and 'rules' that will guide all of our decision-making in respect of ICT. To see how the government's ICT Principles have been updated, and how they may translate into the rules of the new strategy, see the 'Principles' section at the end of this paper.

Technology is ever changing. A strategy at the across-government level cannot sensibly aim to 'pick winners', or set specific technology directions. Because there is so much complexity and variability across the sector, the strategy itself will not identify too many specific actions. Specific initiatives are important, but we are more focused here on the longer term, on building new and better ways of working. An across-government strategy, to be effective, must reach into day-to-day decision-making. We need to ensure that everyone, whether they are making tactical or strategic decisions, is working in alignment with the government's overall strategic direction at all times.

The final strategy will set the scene for on-going implementation by all agencies. Agencies will be expected to respond to the strategy with specific actions, projects and plans. Agencies will also be expected to report on their progress in implementing the strategy.



Emergency services in 2030 use connections like bushfires use oxygen.

Without them, we'd be out of the game.

In 2030 we do things safer. We have the technology, so we use it.

I'm Kym Richards, and I'm a South Australian public servant. As a hills dweller, I'm also a volunteer member of my local CFS, where I'm part of the Emergency Response Team. Because I'm a huge gamer, I get to pilot one of our drones or 'airborne fire observation platforms', and it doesn't get any better than that.

For people like me, people who love to play on-line games in our spare time, living without connections is like having a computer without power – it just wouldn't work. But what a lot of people don't realise is that being connected also saves lives and property.

For example, last Sunday I was on call when my holo-projector started flagging a low level alert. I flicked channels from the game I was playing and saw that we had two units tackling a small grassfire near Bridgewater. After speaking with our local commander, I sent up a drone to take remote temperature readings and check for ember dispersal. I also pulled in a weather feed and ran a future scenario simulation.

Our first response was just a small mopping-up operation, but when I added data from other sources, a different story emerged. Localised micro climate readings from our sensor networks and vehicles on the fire ground, together with updated local wind speeds showed there was suddenly a greater than 60% chance of a flare-up. We decided to dispatch a helebomber and two more ground vehicles to hit the fire with much greater force now, removing any chance of a runaway event later.

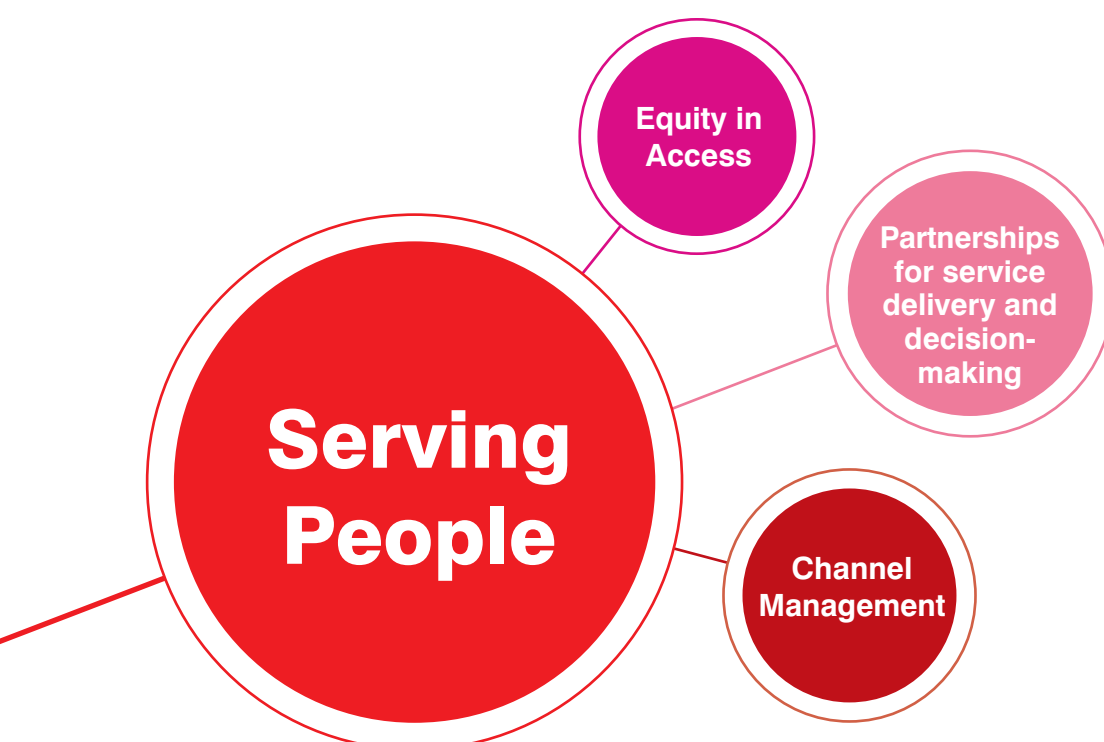
By knowing when and how to act, we manage our technical and human resources more efficiently, and with significantly reduced risk. It makes me proud that SA was so quick to see that climate change meant more frequent and severe fires, so that now in 2030, we have the best connected and best prepared emergency response service in the country.

Serving People

What we do

What is expected to change with a new strategy?

From	To	What this means
Some services on-line	→ Digital by default	The evidence is clear – our customers prefer on-line services, and increasingly, mobile-ready services. Introducing new services, improving old services – everything will start off as ‘digital by default’.
Some engagement	→ Collaborative democracy	Every agency will figure out how best to engage with the public for policy-making, using co-design and co-production approaches, referencing the SA Government’s <i>Social Media Guideline</i> . Tools like social media are no longer simply interesting, they are essential – and we will make it easier for agencies to use them.
Ownership	→ Custodianship	Agencies do not own data, they are custodians. As custodians, our job is to improve access – improving access means moving government from ‘retailing’ to ‘wholesaling’ data, and it means making more government-held data publically available.
Customer service	→ Integrated customer service	Face-to-face transactions are many times more expensive than digitally-delivered services, but to ensure that our service delivery is both efficient and responsive, we will understand our customers, and our services holistically.
Treating everyone the same	→ Serving diversity	We are not all the same – some of us are digitally challenged. As we move more on-line, we will make sure we don’t leave anyone behind.



We already serve well, but the expectation is that we will serve better. Better can mean faster, simpler, easier, and it can also mean deeper, richer and more involved. It changes, depending on whether you are focusing on service delivery or citizen engagement. The focus of this perspective, in the first instance, is on three specific topics: equity in access, partnerships, and channel management. There are many other areas to think about as well; these three are just examples of the kinds of technology enabled changes expected as a result of having a new across-government strategy.

Equity in Access

Australians prefer to use e-government services. However, research also shows that there are demand-side barriers inhibiting uptake of on-line services. Through the government's ICT Strategy, *Ask Just Once*, agencies have made significant progress in bringing their services on-line. However, we need to be mindful that the fruits of technology are distributed unevenly across our society.

If we are to avoid the trap of serving just the Digerati, then we need to find ways to help parts of our community, such as people with disabilities, overcome any barriers to access. Programs such as ForwardIT (a website that helps people learn to safely use the Internet at their own pace) and the Single Entry Point Online Program (SA.gov.au) have directly tackled this issue. The government has agreed to comply with the *Web Content Accessibility Guidelines V2.0 [WCAG 2.0]*, and it will take a considerable effort to reshape our Internet presence to conform with these guidelines.

Partnerships for service delivery and decision-making

Forming partnerships means reaching out to people, listening to them, and actively involving them in decisions that affect their lives. Relationships between communities and their governments are being redefined, from dependency to mature, informed dialogue. In our increasingly connected world, policy developers and decision-makers are expected to connect with citizens and the community too. Government will make community participation and collaboration a regular part of the way we develop policy and make decisions – part of 'business as usual'.

Government will invest in improving the skills, experience and competencies in preparing and enabling staff on the new front-line to work more collaboratively with the community, adopting and using co-design approaches.

We must also help the community understand how and where to get involved. So-called social media tools provide us with new capabilities to partner and connect, but they only take us part of the way. Sometimes we will use technology to consult. Sometimes we will use technology to partner for service delivery. In every case, the focus is on Serving People – connecting them to the things they want, when they want them.

Channel Management

Sure, it's jargon, but if you have customers, you have channels to manage. The Internet is a channel, our customer service centres offer face-to-face and telephone channels, and we still even have the write-a-letter-to-your-Minister channel. Some channels are more effective, and some are more preferred. Data from the Commonwealth clearly shows that our customers prefer the Internet as a channel for dealing with government, but it isn't a simple matter of just moving everything on-line. We need to see our services through our customers' eyes, and we need to understand how we are serving them, across all channels. We need to become data-driven customer service organisations, because it is only through understanding customer data patterns, such as the inevitable ebbs and flows in demand, that we can effectively improve our services. By holistically managing our customer interactions, we can take advantage of opportunities to reduce costs and improve service delivery. For example, where possible and practicable, we will 'channel shift' – moving our customers from high-cost channels, to low-cost, self-service channels.

“The key to successful self-governance in our Age of Information is to create a new balance between public and experts.” Yankelovich

Securing Resilience

Preparing for the unpredictable, but inevitable

What is expected to change with a new strategy?

From	To	What this means
Robust infrastructure →	Resilient communities	Communities are better equipped to 'bounce back' when the unpredictable but inevitable happens – technology is core to prevention, preparation, response and recovery.
Basic security awareness →	We all apply security, all the time	If security is seen as an afterthought, it becomes an obstacle or problem; if it is built in from the start, it is easy.
Protecting the perimeter →	Protecting information	In this era of openness, protecting does not mean 'locking away'; it means taking care, and being thoughtful. We no longer have a 'perimeter' to protect – insider and other threats mean we are exposed and vulnerable everywhere, all the time.
Security as a part-time job →	Professionalising security	The bad guys are smart, sophisticated and active; we need to match them, or we will lose.



The Internet is, in part, populated by bad people who want to do bad things. When we plug into the power grid, we need to know what we're doing; when we connect to the Internet, we also need to take precautions. Whether we like it or not, we are going to have to better the efforts of those who would do us harm. Security, with a view to resilience, will be a higher priority in the coming strategy. Resilience, in this context, is defined as our ability to recover from the unpredictable but inevitable challenges we will face.

● Staying connected, staying alive

When individuals become disconnected, they suffer. When societies become disconnected, they lose competitive advantage and suffer economic loss. The consequences of societies becoming disconnected as a result of environmental or other disasters are significant. Our supply chains have become increasingly complex. Contemporary supply/demand chains are more like networks, with many more connections than the simple, linear workflows of the past. When problems arise in one part of our network, the problems can cascade, causing entire key services to fail.

"More than power, communication was the issue... We didn't have Internet. Cell phones weren't working. Regular phone lines weren't working. You couldn't communicate..."

– commentator reflecting on Hurricane Sandy

In a disaster, or in normal day-to-day operations, just like the rest of society, government completely relies on ICT. The critical services that the government delivers to the community are all underpinned by ICT. As a consequence, the confidentiality, integrity and availability of the government's ICT infrastructure is essential for the physical, social and economic wellbeing of this State.

● Vigilance against espionage and sabotage

In an information economy, information is power, information is money, information is competitive advantage. The threats to our intellectual property and data are real, and they are growing. Seemingly innocuous requests for information can be part of so-called 'social engineering' attacks, designed to trick people into releasing data or information that can be used later, either on its own, or in aggregate with information from another source.

The world is hyper-connected and hyper-competitive, and while technology makes our lives easier, it also makes easier lives for the criminals, terrorists and saboteurs of the world.



"...there are risks for the government and the business sectors in our increasingly connected economy. These risks are real, they are persistent, they are prevalent, they affect the bottom line and they must be a priority for government..." ASIO Director-General

Improving Delivery

Getting more out of what we've got

What is expected to change with a new strategy?

From	To	What this means
Some big ICT projects	→ Big plans, small projects	From now on, we're not going to start up any more big 'ICT' projects. We're only going to have service/information/productivity improvement projects. Projects will be shorter, typically 90 days at most, and they will be planned and delivered by multi-disciplinary teams, not just IT.
Robust ICT governance	→ Integrated governance	We've done a lot to improve ICT governance, but now it is time to go further; we are going to progressively integrate ICT and corporate governance, and link up governance structures right across government. The role of the ICT Board will be strengthened, and its processes will be made more transparent.
Buying software/hardware	→ Buying services	We need to continually re-invest in our hardware/software – just to keep the lights on; but it is the services we buy, especially locally-sourced, that we value the most.
Diffused accountability	→ Clear project accountability	Committees are great for many things, but it is hard to hold a committee to account for its actions. We will hold our executives to account for project successes and failures.



The government's Public Sector Renewal Program is about striving for a higher quality public sector. Therefore, the next strategy will call for an increased focus on productivity, with a particular focus on improving our business process management, project execution and capability building.

Capability Building

ICT is now part of everyone's job. Yes, there will always be specialists, but all of us need to develop new competencies to meet the challenges tossed up by new technologies. The strategy will call for a sector-wide application of the *Skills Framework for the Information Age [SFIA]*, as a necessary prerequisite to ensuring that we are acquiring the right skills at the right levels.

Business Process Management

Services and information are delivered to the public through our processes – our processes connect people with the things they want and need. Eliminating bottlenecks and inefficiencies in our processes helps us deliver better services. There will be an increasing focus on extending and further developing the sector's ability to streamline processes.

The Last Big ICT Project

We need to find smarter, more targeted ways of improving efficiency and effectiveness. Ripping out and replacing systems may seem like a straightforward and strategic response to dealing with so called 'legacy' systems. In fact, history teaches us that we may be just creating a legacy for the next generation to worry about.

Although we can all too clearly see their deficiencies, we ought not be hasty in condemning our ageing legacy systems. Although they often lack the capabilities and flexibility we see in more contemporary technologies, we have to recognise that, on the whole, they have served our democracy well for many years. Sometimes, they are better left alone, safely isolated via technology 'wrappers' that help insulate them from the rest of our technical ecosystem. Over time, data and processes can be progressively shifted to newer, more efficient platforms, an approach which essentially sees legacy systems atrophying, eventually being phased out.

As well as moving away from *big* projects, we need to look at projects in terms of the way in which they help us connect – none of these projects should ever be positioned as 'ICT Projects' – there is no point in an ICT project. The only kinds of projects we need are those that deliver new capabilities or services. In the future, projects will be designed, from the outset, by multi-disciplinary teams to ensure that people and process issues are given at least as much attention as technology issues.

“We want to build skills and capacity within the public sector and work more efficiently to deliver more and better services.”

Hon. Michael O'Brien MP

Working Together

Common problems, shared solutions

What is expected to change with a new strategy?

From		To	What this means
Barriers to collaboration	→	Seamless government	Lack of technology is no longer a valid excuse for not working together – for the most part, we already have the tools and technology to connect.
Agencies competing	→	Share first	Our budget processes often force agencies into 'competing' for resources. From 2013 onwards, we will see increasing numbers of multi-agency Cabinet submissions. From now on, we <i>share first</i> .
Common problems	→	Shared solutions	Often, different parts of government do the same things – <i>differently</i> . Instead of 'going it alone' we are going to share solutions across government.



If *Serving People* is what we do, then *Working Together* is how we do it. For example, correctional services and hospitals are, in some ways, in the same business and they face common problems. They both run businesses that are a bit like hotels. Their management dashboards are similar – although indicators such as the average length of stay are probably interpreted differently. The challenge is to find ways that agencies like these can benefit from collaborating, and from sharing. The strategy will put an emphasis on supporting collaboration and sharing of information, resources and infrastructure.

Share First

Agencies have always been asked to get more out of the resources they already have before looking to Treasury for additional support, but sharing across agency boundaries is harder than it might first appear. Multi-agency budget bids are notoriously infrequent because of difficulties caused by our budgeting processes. It is also hard to sync up planning and delivery cycles across multiple agencies. Agencies have varying priorities, and sometimes even different values – all these things inhibit sharing.

But sharing is not only possible, it is necessary. We need to unlock as much of the latent capacity we have scattered across government. Some simple steps will include requiring that all business cases demonstrate that genuine effort has been made to identify and use existing solutions. Where existing solutions/infrastructure are shown to be impractical, agencies will work to partner with other agencies in acquiring new capabilities. The CIO will put support in place to make it easier for agencies to share.

Collaboration

While not a replacement for face-to-face interactions, communications technologies amplify our ability to collaborate. To get things done, government relies heavily on informal staff networks. Interestingly, our world is being transformed by informal networks using technology to connect. The next strategy will seek to support both formal and informal networking, so that it can more directly support the work of government. A key element will be a major improvement in the capability of platforms like the *South Australian Government Exchange [SAGE]*.

There are all kinds of things that get in the way of public servants connecting; but the least of these is the technology itself. To work together effectively, we need more than technology. The Commonwealth-States *National Information Sharing Strategy* identifies the need to ensure that collaborating agencies establish sharing protocols addressing important issues such as information classifications and levels of trust. When working together, we will have well-established ground rules that all parties can understand and live with. An example is the SA Health strategy, formerly known as CareConnect. The health sector is having to standardise the way in which medical practitioners are identified, because a sector-wide health system needs sector-wide consistency in managing these identities. Integration in our health system is predicated, in part, on having common standards across government, especially common ways of identifying people and their level of trust/authority. Integration across government will require similar standardisation.

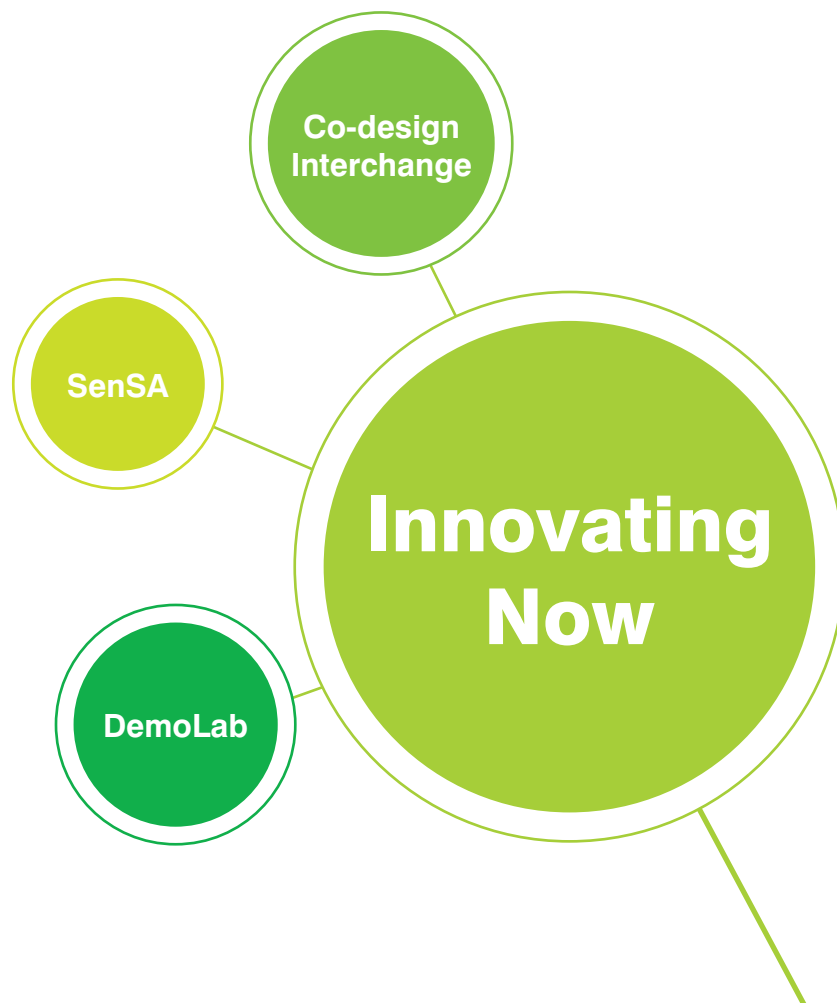
{ “...we can make a choice to seize this very unique and enviable moment
by working together as citizens of this great State.” Raymond Spencer }

Innovating Now

Risk-taking is rewarded

What is expected to change with a new strategy?

From		To	What this means
Risk averse	→	Risk managed	'Risk' is already on most of our meeting agendas; soon, 'innovation' will be as well.
Big monolithic projects	→	Rapid prototyping	Tackle problems in bite-sized chunks, test solutions through prototyping – where prototypes work, scale them up.
Technology driven	→	Multi-disciplinary concept design	Technology is interesting, but it isn't everything; we will look at things from a 360° perspective.
Good deeds done in secret	→	Open innovation	We will find ways to work with the ICT industry, academia, and other sectors, so that we can innovate together.



There are many definitions for the word ‘innovation’. We have used the phrase ‘putting good ideas to work’ as our frame of reference for focusing our efforts around ICT-enabled innovation.

The next strategy will set out some specific initiatives, processes, and support for innovation. For the purposes of this position paper, SenSA, DemoLab and the Codesign Interchange have been highlighted below, but they are just a few examples of the kinds of innovation that we will deliver, because there are many other good ideas rippling throughout the public sector, and we are going increase our efforts to use technology to put them to work.

Co-design Interchange

The Premier has challenged the public sector to innovate, to take risks, and to work with other sectors to co-design new approaches to deal with our challenges. The Australian Information Industry Association [AIIA] has already generously and effectively collaborated with the CIO in developing this paper. Together, we now propose an initiative, the Codesign Interchange, to unleash the innovative capacity of the ICT industry, as well as other sectors like higher education. Together, we will solve some of society’s most intractable problems and take advantage of opportunities to use technology in new and innovative ways.

If government had a way to expose its challenges and problems to a wider audience – we might find that the proverbial ‘wisdom of the crowd’ solves problems faster and better than our traditional processes, especially if the ‘crowd’ we work with includes local companies with world-beating ideas and technical solutions.

There are many examples where this sort of thing already happens. One example is the web site Kaggle.com. Kaggle acts as an interchange, bringing together problems and solutions. Kaggle provides a platform for organisations to post data, associated challenges or questions, seeking answers and solutions from all comers. Kaggle has been highly successful in helping to solve difficult problems for many large corporates, and increasingly, governments as well. The Codesign Interchange will act in a similar way, strengthening private sector > innovation > public sector connections.

Although the concept is simple, there are things to work out, such how to manage intellectual property. For example, if a South Australian business has an idea on how to fix a problem or meet a challenge, they probably won’t want their intellectual property loosely thrown around. So like any arrangement between buyers and sellers, there will need to be clear terms and conditions to protect all those involved. All of these issues can be managed and sorted out.

How will the Codesign Interchange be set up? How will it work? We will begin as we mean to finish, by working together. The model for the Codesign Interchange will be designed in collaboration with stakeholders, especially stakeholders outside government, such as the AIIA and other industry groups.

SenSA

There is a lot of buzz about governments releasing data sets, but not all data of interest is in government hands – the community can generate and manage data too. For example, a small start-up in the US, Asthmapolis, has developed a little device that attaches to an asthma puffer. Every time you take a puff, it sends a little bit of telemetry data to a networked database and mapping service, reporting where you puffed. Imagine a map of all puffer use in South Australia – it could show which areas people needed their puffers the most. The community could directly contribute to the epidemiological data required to identify patterns, problems, and opportunities in the management of their asthma. More importantly, individuals would have detailed, time and location-stamped data to share with their GPs; the data will help them self-manage their condition. (continued >)

Innovating Now (continued)

Risk-taking is rewarded

Or, why not a network of thousands and thousands of sophisticated, constantly moving and updating electronic sensors, capable of sending all kinds of telemetry data back to an (anonymous and secured) mapping service covering South Australia? It is here, now. With little effort and even less money, we could set up a service where movement data from bicyclists could be collected (with their consent) in real time, for mapping and analysis. Bicyclists, using their existing GPS-equipped smartphones, could collect data on their travel patterns, and all they have to do is leave home!

Imagine all kinds of telemetry being collected, mapped and made available for analysis, policy development, and more. We could call it 'SenSA' – a crowd sourced telemetry reporting system. SenSA could provide a new way of thinking about how we tackle problems in our State. It could provide an evidence base that could be used in ways we haven't even thought of yet.

DemoLab

The South Australian Government will establish DemoLab, a virtual laboratory for conducting trials and experiments in collaborative democracy. DemoLab will coordinate multi-disciplinary teams made up of staff seconded from agencies, and people drawn from industry, academia and the community. DemoLab will use the best technical, operational, and behavioural thinking to address specific challenges and opportunities. Project teams will spend no more than thirty days developing small-scale, operational prototypes of their solutions. Lessons will be learned, connections made, and successes will be recorded and replicated across the public sector.

This concept, more commonly known as an innovation lab, is not new. Most, if not all of the major high-technology companies such as Google, IBM, and Microsoft have them set up, and in her book *Wiki Government*, Beth Simone Noveck, former United States deputy chief technology officer for open government, says that;

'Projects should be evolutionary in nature and subject to iteration and improvement. By leveraging the expertise and assistance of the technology community to work, initially on a small number of pilot projects, it will be possible to prototype more rapidly.'

This model emphasizes the importance of establishing projects as collaborations across government and with the public that can generate new ideas and channel 'many eyeballs' toward the needs of society.

{ “... South Australia remains a ‘test bed’ for innovative thinking. A place where the future regularly happens first...” Premier Weatherill }

Principles

As stated earlier, the new strategy will provide agencies with a clear understanding of the rules that are meant to guide their day-to-day decision-making.

To develop the rules that guide our decisions, first we must start with a set of principles that reflect the government's strategic direction and can be used as a basis to derive more specific guidance.

The government's current ICT Principles were developed in parallel with the ICT strategy, *Ask Just Once*. Following a series of workshops involving executive stakeholders in June and July 2012, it was agreed that the current ICT Principles are still relevant, but require some updates.

Changes and additions to these principles have been made following this feedback. A summary* of the current principles has been provided below, followed by the updated principles being proposed.

Current ICT Principles

1. ICT supports and transforms Government

ICT is a service delivery function – it supports Government by helping to improve the efficiency of operations; it enables transformation by opening up possibilities for new and improved services for citizens and delivers information to support more informed decision-making.

2. People are the focus of all ICT activities

The Government invests in ICT so that citizens, staff and partners all have the best possible access to information and services.

3. Information is an asset

The Government manages information as an asset that it holds in trust on behalf of citizens.

4. Information is shared

Information is freely shared across Government.

5. ICT infrastructure is an asset

The Government manages Information and Communications Technologies in much the same way that it manages other assets.

6. Infrastructure is shared across Government

To achieve cost efficiencies and optimise outcomes, agencies are expected to share the ICT infrastructure under their management with other parts of Government.

7. Proven standards, technologies, and approaches are used

Innovation comes from building on success, not through unnecessary reinvention.

*This is a summary of the government's existing ICT Principles, for the full text, refer to SA.gov.au/OCIO



Proposed ICT Principles and Rules

Five principles have been proposed to replace the current ICT Principles. The changes have been made based on the feedback received from executive stakeholders from across government. This feedback included suggestions to add principles that address resilience and innovation.

Examples have been provided for the first principle below to illustrate the types of rules that will be developed. These example rules are deliberately draft and incomplete. The Office of the Chief Information Officer will work collaboratively with agencies in the next phase of consultation to develop a complete set of rules to put each of these new ICT Principles into effect.

Proposed ICT Principles

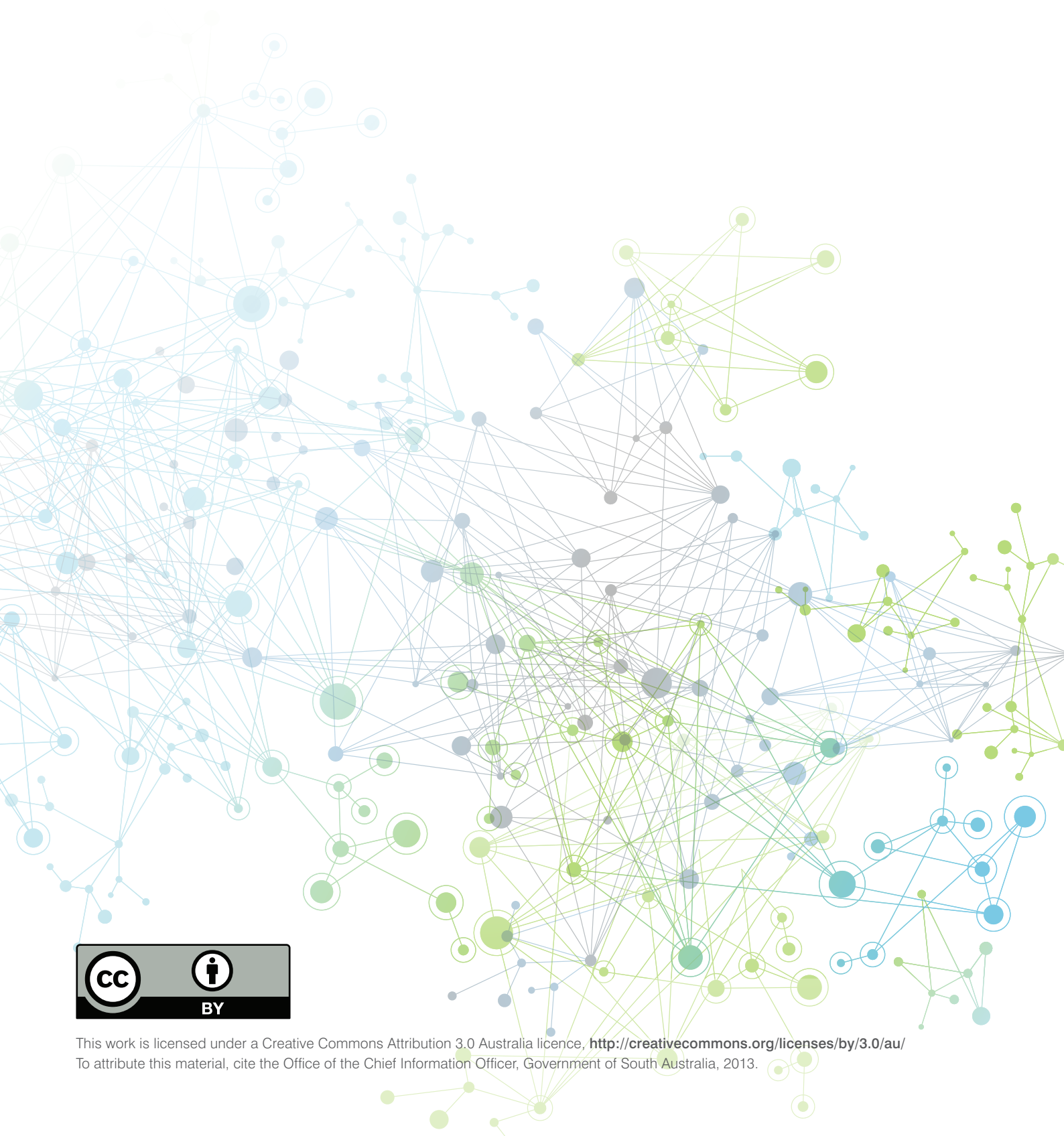
1. We serve people best when we get the best from technology
2. We are responsible for helping to ensure that our society is resilient
3. We are accountable for continuously improving our productivity
4. We share information and we share resources
5. We manage risk so that we can innovate

Proposed ICT Rules

1. Therefore, we always:
 - think '*digital by default*' when designing new services or changing existing services
 - use collaborative and open approaches, supported by appropriate technologies, when designing policies, services and implementing programs
 - manage South Australians' data and information as precious assets that belong to the whole community
 - understand our customers' needs and preferences, and we holistically manage our interactions with them across all service delivery channels
 - understand and address diversity and disadvantage in all our service offerings.
2. – To be agreed through consultation –
3. – To be agreed through consultation –
4. – To be agreed through consultation –
5. – To be agreed through consultation –

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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