# #IllawarraDigital

A Regional Digital Strategy for the Illawarra

Final Full Report July 2013

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Digital Futures.

Explor Consulting Pty Ltd has prepared this strategy for Regional Development Australia Illawarra Inc. and the three Illawarra Local Government Authorities: Wollongong, Shellharbour and Kiama.

Explor Consulting is the leader in digital futures consulting.

We help communities and their governments to plan and build better futures, taking advantage of the opportunities of digital technologies and broadband services.

Explor works with governments and organisations at all levels: local, regional, state, territory, provincial and national.

We provide advice, we help develop digital strategies, we facilitate the funding and initiation of projects and we provide management assistance.

Explor's people have unique insights into how digital technologies and broadband services can be exploited to support economic, social and environmental development.

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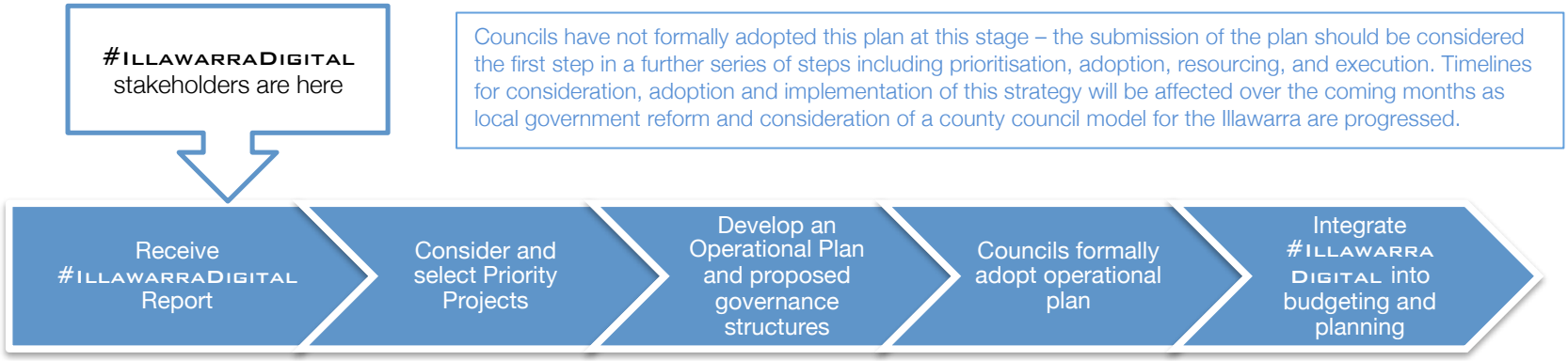
## About this aspirational plan

This digital futures strategy has been prepared to enable the communities of the Illawarra to capitalise on the benefits of broadband and digital technologies. At the time of submission this document should be considered as an aspirational plan only. Councils and other stakeholders will need to review the plan carefully, prioritise projects, arrange governance structures, and consider precipitant actions against other priorities and resource constraints.

Explor Consulting was commissioned by Regional Development Australia Illawarra Incorporated (RDA Illawarra – RDAI) together with its three constituent councils (Wollongong, Shellharbour and Kiama) to prepare this strategy, building on the strong leadership, strategy and action of the region over recent years. This strategy has been developed through research and consultation with many people from the Illawarra's different communities, local government authorities and key regional organisations.

Explor acknowledges the time, advice and insights provided by those community members, council staff and regional development organisation staff, all of which was of great value. Explor particularly appreciated the support provided by the staff of the four key organisations that participated in steering the project.

This digital strategy document begins by highlighting the aspirations of the communities of the Illawarra and summarises the region's strengths and challenges. It explains why the Illawarra must invest in a digital future. The document outlines the digital future that could be achieved through a set of strategies and actions. The document concludes with suggested next steps.




Councils have not formally adopted this plan at this stage – the submission of the plan should be considered the first step in a further series of steps including prioritisation, adoption, resourcing, and execution. Timelines for consideration, adoption and implementation of this strategy will be affected over the coming months as local government reform and consideration of a county council model for the Illawarra are progressed.

# Executive Summary: #IllawarraDigital at a glance.

The Illawarra's three councils of Wollongong, Shellharbour and Kiama are pursuing better futures for the region's diverse communities, built on economic growth, productivity improvement, social inclusion and sustainability.

They are also seeking to take a broader regional view and collaborate to add to the region's vibrancy while preserving its unique regional identity.

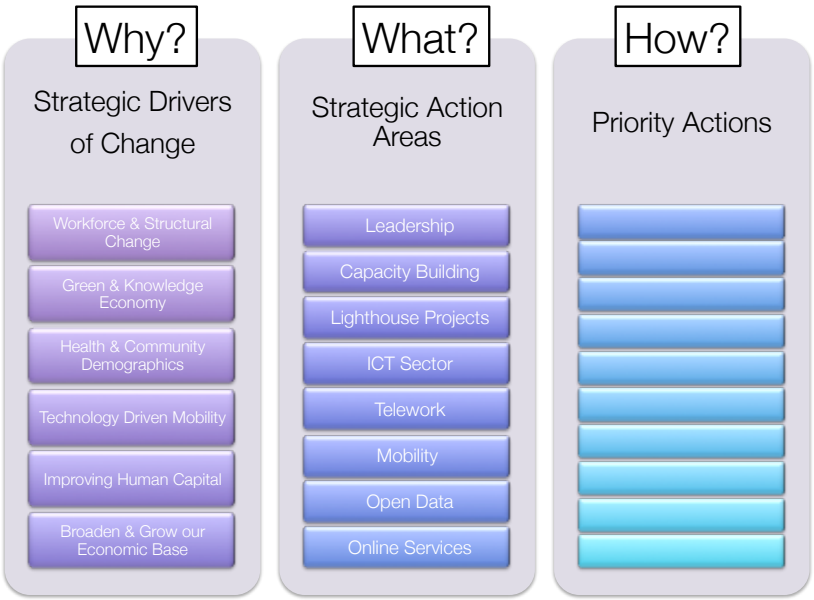
Broadband services and other digital technologies can help the region's communities to create better futures. The most successful communities are those that adopt a strategic approach, with projects and actions that match the distinct characteristics and opportunities of the communities.

RDA Illawarra, together with the three councils, commissioned this digital futures strategy as a planning resource to help each of the Illawarra's three Councils to pursue strategies that match the opportunities of their localities. This is also a plan to guide collective action by the local Councils, Regional Development Australia and the other government and non-government organisations.

The strategy offers a vision of a better future for the region, enabled by digital technologies and a set of proposed strategies to achieve that vision.

This plan has been prepared by Explor, a consulting firm that specialises in helping communities and their governments to plan and build better futures, taking advantage of the opportunities of digital technologies and broadband services. It was prepared from December 2012 to June 2013 through research and consultations with many members of the community and the staff of the local councils and regional development organisations. It builds on earlier work done to prepare and implement a digital futures strategy, particularly by the Kiama Municipal Council.

To achieve the vision and goals, this strategy nominates eight (8) priority strategic action areas to be pursued by the Illawarra's key regional bodies, local government authorities and other stakeholders. By considering this aspirational plan and prioritising projects councils, RDAI and other stakeholders will be able to complete the "How?" column below.



## 1. Leadership: Lead and collaborate on regional digital futures.

The region, through RDAI and the three councils, should commit to a regional digital strategy and establish sound arrangements for leadership, collaboration and the management of agreed actions. They should promote the strategy and become exemplars of modern digitally enabled organisations.

## 2. Capacity Building: Build digital capacity in the region's key sectors.

Through long-term effort and recent funding available through the Digital Enterprise Program, the Illawarra region, particularly in Kiama, has made some progress towards building digital awareness and capacity in key industry sectors at the enterprise level.

The Digital Enterprise Program, despite best efforts and quality execution is only likely to directly impact fewer than 2% of enterprises registered in the region. The long-term challenge for the Illawarra is to build self sustaining programs that are seeded by regional bodies but which significantly exceed previous programs' inroad into enterprise and sector level digital capacity building. Through a range of integrated approaches the Illawarra should build self-referential, sustainable industry-led networks, events and knowledge sharing and align those efforts to a bold set of five-year goals.

## 3. Lighthouse Projects: Identify and build 'lighthouse' projects in each of the region's key sectors.

For each key sector the lead organisation should work with industry and government stakeholders to create a compelling narrative and digital vision for that sector. Priority action under this strategic grouping may include the identification of local champions, development and distribution of their success stories to others in the sector

Further, RDA Illawarra should work to identify opportunities to seed enterprise-level lighthouse projects that can inform and inspire other enterprises in the sector. For example a Centre of Excellence that engaged the local manufacturing industry in 3D printing may be an opportunity for a lighthouse project in that sector.

## 4. ICT Sector: Accelerate the growth of the Illawarra ICT sector.

The region, particularly through the University of Wollongong, has demonstrated national leadership in creating an innovation ecosystem to drive growth in ICT start-ups and support innovation.

Some 9% of Australia's ICT students graduate from the University of Wollongong. In order to maximise the precipitant opportunities the region should continue to build the current innovation ecosystem and link it more closely with industry, seek to attract "near shoring" opportunities particularly from Sydney-based industry, and attract targeted re-locations and investment by significant ICT sector businesses to the region.

## 5. Telework: Transform the work patterns and accelerate efforts to make the Illawarra a 'telework' leader.

A significant number of employed people who live in the Illawarra leave the region each day to attend a workplace in greater Sydney. By building infrastructure and affecting cultural change a greater proportion of these people would work from home, in the

smaller centres of Kiama or Shellharbour, or would commute to a telework centre in the centre of the City of Wollongong.

A greater number of people teleworking for a greater number of days will drive growth in the local economy, ease the pressure on transport infrastructure, improve the 'lifestyle' attraction of the region and reduce costs for Government and industry. The region should set a bold target to increase numbers of teleworkers in the region and partner with Government and industry to build infrastructure that would support that goal.

## 6. Mobility: Extend access to digital infrastructure - with a focus on mobility.

The importance of mobility and ubiquitous connectivity to the region cannot be overstated. All industry sectors including tourism, transport, logistics, education, health and community services and manufacturing will increasingly rely on ubiquitous mobile connectivity to drive service innovation and productivity growth.

The region should actively build on its current mobile and wireless infrastructure in order to maximise productivity and opportunity for the future. Digital infrastructure should be extended so that there are more public outdoor spaces and shared indoor spaces where people who are working, learning or enjoying their leisure time can access broadband services, particularly through mobile devices. All regional bodies should align their lobbying and planning efforts towards extending wireless and mobile infrastructure in the region.

## 7. Open Data: Accelerate efforts to make the Illawarra an 'Open Data' leader in Australia.

Open data often refers to government information that has been made available free for anyone to use. Sharing of government information as open data without cost will benefit individuals, communities, companies and the whole region. Giving access to government data free of charge will be good for the region's enterprises. It will breed new markets and support innovation.

Increasing data openness makes it easier to use for other government and regional agencies in planning for the future. Open data may also help in finding practices where the potential of digital information hasn't yet been realised. Some effort has already been committed to better sharing and openness of data across the region's public sector bodies. The RDAI should lead in the acceleration of effort to see the Illawarra recognised as an Australian leader in open data.

## 8. Online Services: Accelerate efforts to build better Government and Community online services.

All three councils in the Illawarra region have demonstrated leadership in some areas of online services. Building on this leadership Councils should work together and deliver better online services through sharing knowledge, potentially implementing shared systems where appropriate and engaging the community through a single region-wide online consultation platform and standards. While system and technology will be important in this change – cultural change with councils demonstrating a "think online first" principle will be as important.

# The Illawarra and its communities have a strong future.

## The Illawarra is a strong, unique and diverse region with a rich history and culture that is undergoing significant demographic and economic change.

The RDA Illawarra region encompasses an area of 1,128 square kilometres and includes the three local government areas of Wollongong, Shellharbour and Kiama with an overall population of approximately 283,000.

The region has undergone significant economic change over the past 20 years. Once dominated by manufacturing and mining, the region now has a more diversified economy. Steel-making and coal mining still play an important role in this economy, but there are now major contributions from industries including retail, information technology, health and aging, tourism, financial and property services, hospitality and cultural industries.

Wollongong City Council is the largest Local Government Area (LGA) and is home to over 192,000 people. Wollongong LGA is the principal industrial area in the region, with its manufacturing heart centred on BlueScope Steel adjacent to the port of Port Kembla. The University of Wollongong is an Australian leader in Information & Communications Technology (ICT) and is focused on driving partnerships and collaboration between the research and business communities

South of Wollongong LGA the predominant industries in the Shellharbour LGA (population 63,000) are retail and construction and health and aging. Some 60% of the Shellharbour workforce works outside the area, with almost half of the workforce commuting to their workplace in Wollongong. The occupation categories of labourers, machinery operators and drivers, and technicians and trades workers correspondingly represent a higher proportion of the workforce in the Shellharbour LGA when compared to the Illawarra region.

Kiama LGA, the southernmost of the Illawarra LGAs, has a population of 20,000, and is largely rural. Despite this, Kiama has a workforce dominated by managerial and professional workers, accounting for approximately 40% for the LGA workforce, with 55% of the workforce employed outside the area. Health and aging services are a rapidly growing employment sector in the Kiama LGA. The rural sector also makes a significant and continuing contribution to the Kiama economy. Its rural and coastal setting also strengthens Kiama's visitor economy.

## The Illawarra is a region in demographic and economic transition.

On 22 August 2011, BlueScope Steel Limited (BlueScope) announced a major restructure of the company's Australian operations in response to "...significant economic challenges and structural change in the global steel industry..." The restructure led to 1,000 direct retrenchments, flowing from the closures of the No. 6 Blast Furnace in Port Kembla (NSW) and the hot strip mill in Western Port (Vic).

There had been a sustained adjustment in the structure of the Illawarra regional economy since the 1980s. At the time of the closure, the region's traditional employment base – heavy manufacturing and the oil and gas pipe industry – had been struggling due to similar pressures as those faced by BlueScope. In contrast, other industries were not struggling as much. (For example, there were several large building developments underway and the aged care sector was growing.)

The region had a relatively high unemployment rate leading up to the closure and moderate levels of socio-economic disadvantage. The weighted average unemployment rate in the Local Government Areas (LGAs) making up the Illawarra was 7.2% in 2010, compared to 5.5% Australia wide.

Diversification and development of new industries is a common need for the entire region, but is a particular need for the Shellharbour LGA, which is over-represented in the unskilled and semi-skilled job categories.

The economy of the Illawarra is something of a mixed bag. On one side, certain sectors have recorded strong employment growth, including health care and social assistance, and public administration and safety. The mining sector has also experienced a revival in fortune in recent years.

On the other hand, employment growth in the traditionally strong area of manufacturing has been more modest and is likely to come under pressure following the announcement of job losses by BlueScope Steel. In the words of RDA Illawarra:

*"The recent announcement by BlueScope Steel to reduce production at its Port Kembla Steel Works and move its business away from export sales and concentrate on the domestic market brings a range of new and demanding challenges."*

The same report noted the need for the Illawarra to "consciously reinvent itself", stating "To grow and develop a sustainable economy, it is essential to build new economic drivers to replace the ones that served the city and region in the past..."

Available data suggests that the age mix of the Illawarra will also change significantly over the next 25 years as the baby boomers move out of the workforce and into retirement. While the working age population is predicted to increase by more than 10,000 by 2036, the 65 plus population is predicted to almost double from 46,000 in 2011 to 82,500 in 2036). This would equate to 24% of the entire population (significantly higher than Sydney and higher

than NSW as a whole), placing a further strain on the region's existing aged care operations.

## The Illawarra aspires to a great future.

The communities of the Illawarra region have been working the region's three councils and the RDAI to identify their aspirations and preferred futures through strategic community plans and other plans. The councils and regional development organisation have worked collectively to identify the preferred futures for the whole region.

Extrapolating from these community-led plans, through desktop research and community engagement during this consultation, the following aspirations have been identified:

Economy and employment: The Illawarra's economic base will be broadened, its business productivity will have increased and the levels of innovation will continue to increase through collaboration between enterprises and with institutions like the University of Wollongong. The region will build on its advantages and strengths in manufacturing and food processing, education, tourism, health services, logistics related to the resources sector, construction and other sectors. There will be more sustainable employment, particularly for professionals, for creative people and for young people.

Health and wellbeing: The people of the Illawarra will lead healthy and active lives. People with special needs, including aged people and those with disabilities, will have good life quality. There will be good access to local health and related services delivered in innovative and more sustainable ways by Government and Non-Government-Organisations in partnership.

Education: There will be an increase in the levels of educational attainment and qualifications and an expanded skill base in the Illawarra. There will be expanded access and more course options available throughout the whole region for all levels of education, including VET and university education. The region will capitalise on the leadership of the University of Wollongong to create more fulfilling career and business pathways within the region.

Place & identity: The population of the Illawarra will grow, but the region and its different districts will retain their own unique and highly regarded identities and lifestyle opportunities in scenic locations. The region will be seen as being distinct from the Sydney metropolitan area and will be renowned for its coastal and idyllic lifestyle opportunities.

Quality of life: The Illawarra will continue to grow as a great place to live for people of different age groups and backgrounds. There will be vibrant communities of different sizes ranging from a dynamic city and charming towns through to small hamlets, coastal and agricultural districts. The region will be recognised as a lifestyle destination.

Sustainability: Lifestyles, industries and developments will be sustainable. A high value will be placed on preserving natural ecosystems, landscapes and waterways. Climate change and other environmental threats will be proactively managed.

Access to services: There will be greater access to government, commercial, retail and community services for the different communities of the Illawarra.

Social inclusion: There will be a strong civil society with active community organisations throughout the Illawarra. The level of social isolation will be reduced.

Community safety: The Illawarra will be a safe region in which to live, work and visit.

Governance: The people of the Illawarra will be served by effective and responsive local government authorities and other government bodies, working collaboratively and co-operatively, and sharing appropriate services.

## Community aspirations and other plans

The people and organisations of Wollongong, Shellharbour and Kiama have been planning for their future and delivering those plans for many years. At the individual council level economic and community plans have documented community's aspirations. Within the constraints of budget and capacity each of the region's councils are pursuing their own strategic plans. The implementation of actions in the priority strategic areas of this plan must align with those well-documented aspirations.

The key goal of RDA Illawarra is to work with the Illawarra community and the three tiers of government to promote and support regional economic and social development in the region. RDA Illawarra has identified the following areas to foster the growth of employment in the Illawarra:

- Broadband/ICT
- Green Jobs
- Education and Skills Development
- Transport and Strategic Infrastructure
- Equity and Human Services
- Tourism, Arts and Culture.

Each of the region's three councils also has aspirations and plans developed through community consultation. Through each Community Strategic Plan the communities of Wollongong, Shellharbour and Kiama have clearly articulated objectives in the areas of Leadership, Community, Economy and Environment.

The region also recognises the relationship between this plan and other State and Federal strategies. The NSW State Government has clearly renewed a focus on developing NSW's strengths in the digital economy through its Digital Economy Industry Action Plans under the framework of the NSW Economic Development Framework.

Also related to this strategy is the Australian Government's National Digital Economy Strategy. The Australian Government wants to ensure that Australia becomes a leading digital economy.

To measure progress in realising this vision, the government has set eight Digital Economy Goals that focus on the areas of:

- Online participation by Australian households
- Online engagement by Australian businesses and not-for-profit organisations
- Smart management of our environment and infrastructure
- Improved health and aged care
- Expanded online education
- Increased teleworking
- Improved online government service delivery and engagement
- Greater digital engagement in regional Australia.

The following diagram illustrates the clear connections and relationships between this strategy and other plans and actions underway across the region, the state and the nation

Aligning with key regional, state and federal plans to improve access to resource.

A digital strategy that brings new strengths to existing regional plans and goals.

**National Digital Economy Strategy Goals 2011**

- Online household participation
- Online engagement by businesses
- Smart management of our environment and infrastructure
- Improved health and aged care
- Expanded online education
- Increased teleworking
- Improved online government service delivery
- Digital engagement in regions.

**RDA Illawarra Regional Priorities**

- Broadband / ICT
- Green Jobs Illawarra
- Education & Skills Development
- Transport & Strategic Infrastructure
- Equity & Human Services
- Tourism, Arts & Culture

**Council Plans & Strategies**

- Wollongong Strategic Plans & Programs
- Shellharbour Strategic Plans& Programs
- Kiama Strategic Plans & Programs

**#IllawarraDigital Strategic Action Areas**

- Leadership
- Capacity Building
- Lighthouse Projects
- ICT Sector
- Telework
- Mobility
- Open Data
- Online Services

# Digital technologies offer both opportunities and threats for the Illawarra.

A number of communities in the Illawarra will be among the first in Australia to gain high-speed broadband connections through the NBN, but this is only one element in the array of digital technologies that are transforming the way citizens live and work. Over recent decades there have been dramatic developments in these digital technologies:

- High speed computing
- The miniaturisation of electronic equipment
- Mobile phones and mobile devices
- The internet
- The digitisation of information and audio-visual materials.

We now regularly use email, the web, social media (such as Facebook and Twitter), Smartphones and iPads. Importantly, these technologies have become affordable, pervasive and inter-connected.

However, the changes are not only in the availability of the new technologies: the significant changes are in the way we are using the technologies to do things very differently. Individuals of all ages have changed the way they work, relax, communicate, learn and shop. Many businesses have changed the way they interact with their customers, their suppliers and their staff. Governments have changed the way they deliver their services and engage with their citizens.

*One third of the Australian economy faces imminent and substantial disruption by digital technologies and business models.*

*- Deloitte Australia, 2011*

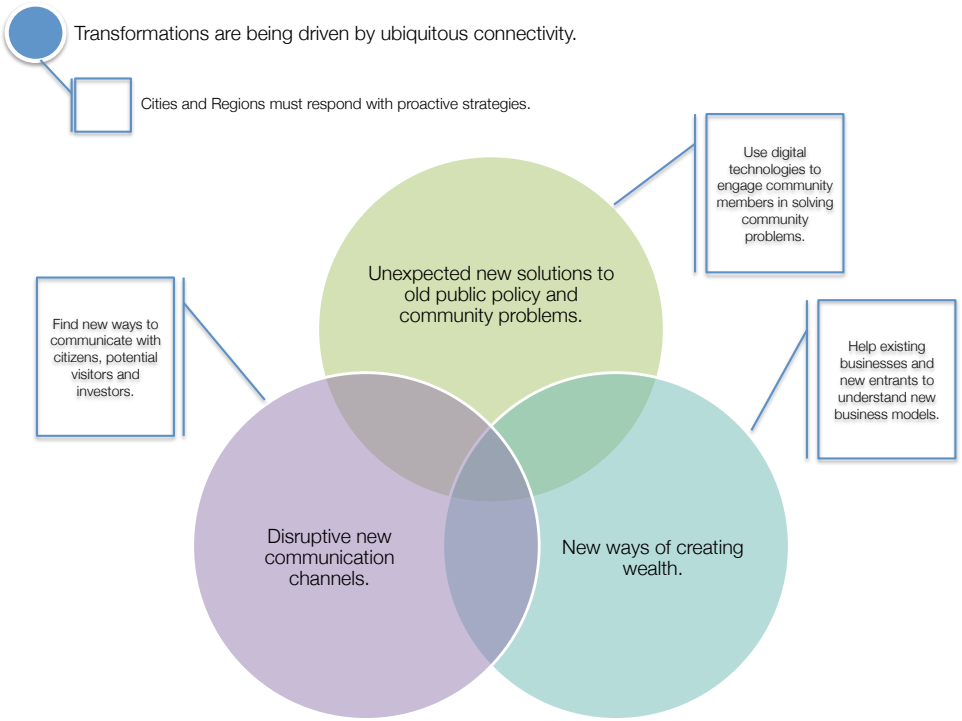
Digital technologies are both disruptive and transformative. For example:

- Online services are displacing face-to-face services, with huge impacts on sectors such as retail, banking and education.
- Broadband services and digital tools are enabling new patterns of work such as telecommuting for individuals and new forms of relationships between businesses including offshore outsourcing.
- Digitisation of information and entertainment resources is destroying the market for many traditional products such as books, newspapers and music on physical media such as CDs.
- Online media is changing the way people find out about the places they want to visit, the experiences they want to have and the products they want to purchase.
- Smart technologies are creating new opportunities for energy saving through efficiencies in our buildings and our energy grids.
- People and businesses are becoming more demanding about how and when they interact with their governments, for both decision-making and service delivery.

Digital technologies also offer opportunities for communities to thrive. They can provide:

- # New solutions to old problems
- # New ways of creating wealth
- # New communication channels and greater accessibility.

Forward thinking and practical planning helps communities to deal with the disruptions that new technologies can create and to build on the opportunities that are available. The digital future is a key pillar in creating a vibrant community future.




## The Illawarra also faces some threats arising from digital technologies.

It has been claimed that the retail and media sectors are the "canary in the coal mine" for other industry sectors yet to feel the full force of economic disruption arising from digital and online technologies. Prior to the Global Financial Crisis in 2008/09 Australians were only conducting 3% of their retail transactions online. Recent data shows that rate of transaction having risen to 18-21% in 2013. The disruption to traditional media forms such as newsprint and free-to-air television is equally powerful. Regionally based television production and provision such as WIN TV have many opportunities arising from high speed broadband and many threats that equally must be addressed.

Deloitte's recent report Big Bang, Short Fuse provides evidence that one third of the Australian economy faces imminent and substantial disruption by digital technologies and business models. This disruption will be felt hardest in industry sectors and enterprises that are under prepared and lack the digital capacity to respond to these rapid changes.

Areas of government service delivery and online engagement are not immune from these significant threats. Due to the prevalence of mobile consumer devices like the iPad citizens are increasingly expecting to interact with all levels of government via a sophisticated online channel. This expectation is rapidly growing and is particularly acute during times of community crisis. Increasingly communities are self-organising using social media platforms during and following a natural or other crisis event. Government agencies and institutions that are unable to communicate effectively with citizens through these new digital channels will be severely impacted.

Demand for health and ageing services in Australia is growing at 18% pa whereas supply to meet this demand is constrained by government revenues at around 3% pa. It is the regions and communities that are best able to identify digital and online solutions to augment health and aging service delivery that will best bridge this increasing gap.

*The table following highlights 12 areas where digital technologies can help achieve social, economic and environmental benefits.*

| | |
|---|---|
| Connected households | Confident and capable people living in households with good broadband connections and digital services can have better access to services and are able to be more flexible in how, when and where they work. |
| Local information | Rich local information, delivered through interactive digital services, allows people to be more informed, supports greater community participation and helps to bring communities together. |
| Vibrant and sustainable living | Technology enabled buildings and infrastructure can reduce environmental impacts through better management of energy consumption and through reductions in required travel. |
| Community health and wellbeing | Online services in homes and community facilities can improve access to health and community care professionals. Online services and digital technologies can also enable many people with special needs to live independently. |
| Community education and skills | Access to education and training can be improved for students and learners of all ages through access to digital resources and online services in their homes, workplaces and other locations. |
| Community safety and security | Online services can provide better community access and sharing of information about local safety, security risks and critical incidents. |
| Engagement of the socially excluded | Online services can help socially excluded people to connect to other people, to access support services and to develop basic skills. |
| Democracy and open government | Digital tools can be used by governments to extend the way they engage with their citizens, to support collaborative decision making and to improve transparency through access to rich sets of government information. |
| Online government services | Carefully designed online services are integrated, efficient, timely and citizen centric. |
| Key economic sectors | Digital tools and online services are critically important for larger businesses and are used to support customer interactions, supplier interactions and internal operations. |
| Small business sector | For smaller businesses, digital tools and online services support customer interactions and other operations. |
| ICT & Digital Workforce | For the ICT industry and teleworker digital tools are increasingly leading to regional opportunities for near-shoring and accessing non-local markets. |

# A Vision for #IllawarraDigital

Over the coming decade the Illawarra and its communities will come to be recognised nationally and internationally as a leader in the deployment of digital and online technologies that enhance the lifestyles and livelihoods of the region's residents including

- # Global companies will invest in the Illawarra due to the quality of place and advanced low cost open access to ultra broadband communications that supports an array of talent working in an environment conducive to collaboration and innovation.
- # Illawarra businesses will collaborate with the arts and cultural communities to define new frontiers in digital media thanks to a competitive blend of creativity and technology that produces new products, services, investments, international trade and employment opportunities for all residents of the Illawarra.
- # Residents living in and outside of the urban centres of the Illawarra will have access to the best interactive and diagnostic health, learning and training, and business development services all available without leaving home.
- # Open access high-speed broadband infrastructures will facilitate new health delivery systems that will dramatically expand support for Illawarra residents living with chronic disease.
- # Aging residents of the Illawarra will be able to access enhanced services caregiver support in their home extending the period they are able to live quality independent lives.
- # Intelligent buildings, smart grids and other environmental initiatives will reduce the carbon footprint of Illawarra communities, contributing significantly to the regional, state and national environmental goals.
- # New forms of telepresence and online collaboration across and outside the Illawarra will stimulate collaborative research, innovation, the creation of new young companies and the improved competitiveness of others.
- # Learning in Illawarra schools and institutes will truly take place beyond the classroom, tailored to each individual's own unique style, pace, place and time. Virtual collaboration between students, parents and teachers will work seamlessly.
- # Advanced forms of entertainment and information services will be connected to community home entertainment centres presenting new ways to watch hundreds of cultural, sporting, news and other events.
- # Residents of the Illawarra will interact through a digital channel of their choice with government and other service providers and they will be empowered to affect public policy outcome through access to open government data and online consultation.

# Goals for #IllawarraDigital

This plan proposes the following five-year goals for consideration early in the implementation process.

| 1. Economic and business goals | 2. Community goals | 3. Government & infrastructure goals |
|---|---|---|
| 1.1 Illawarra businesses will be better able to survive and thrive in the region through access to broadband services and appropriate digital technologies, including support for improved levels of employment sustainability and a greater range of employment occupations | 2.1 People of all backgrounds and ages in the Illawarra will have the confidence, capability and access to use digital technologies to support fulfilling, creative and healthy lives which enable them to be safe and socially connected. | 3.1 The Illawarra will build on its telecommunications infrastructure strengths with a focus on delivering and exploiting greater mobile connectivity and capacity for key industry sectors, enterprises and individuals. |
| 1.2 Illawarra businesses will use digital technologies to grow their market share, improve productivity, enhance their knowledge resources and build new networks of suppliers and partners. | 2.2 Illawarra health and community service providers will improve the efficiency and effectiveness of service delivery to disadvantaged and other targeted communities through the utilisation of online and associated digital technologies. | 3.2 The Illawarra will be served by councils that use digital technologies to provide effective and efficient local services based on local innovation and the sharing of resources with other authorities. |
| 1.3 The Illawarra ICT sector will grow substantially through better access to local markets, expansion of access to national and international markets and higher levels of innovation. | 2.3 The Illawarra will support the attraction and relocation of new residents by offering early release digitally enabled facilities, comprehensive online information, access to advice and responsive online government services. | 3.3 Online services available to Illawarra's residents and visitors will be rich, extensive and easy to use. |
| 1.4 The Illawarra will support the establishment of new businesses of all sizes by offering digitally enabled facilities, comprehensive online information, access to advice and responsive online government services. | 2.4 Illawarra communities will benefit from enhanced local job opportunities; improved outcomes in education, health and well-being indicators and improved Council communication to residents. | 3.4 The Illawarra will be better served by improved infrastructure that meets the community's growing and changing needs. |

## 1. Leadership: Lead and collaborate on regional digital futures.

The Illawarra has three separate local government authorities that serve different communities with different needs. Each community will face its own journey towards its digital future. Individual communities and the region as a whole will achieve more if regional government and other leading bodies collaborate and share appropriate resources. This will require region-wide leadership.

The Illawarra's key regional bodies, local government authorities should commit to a digital strategy and establish sound arrangements for leadership, collaboration and the management of agreed actions. They should promote the strategy and become exemplars of modern digitally-enabled organisations.

Wollongong is leading the nation through Advantage Wollongong (AW) by exhibiting for the last two years at the CeBIT conference in Sydney. Following the success of the 2012 stand it was decided to expand the AW stand in 2013. Expansion in 2013 saw AW promote many Wollongong based programs and enterprises into the Sydney and national markets including the UoW's Innovation Campus, iAccelerate, and the Faculty of Infomatics. Participating businesses included Selera Labs, Pactera, Metronode, Relativity and Internetrix.

Exhibitors not only were able to promote their own business services but it also allowed the Advantage Wollongong team to showcase the ICT strength of Wollongong by having these businesses on the stand.

Illawarra organisations to engage in the leading change in the implementation of #IllawarraDigital include:

- # RDA Illawarra
- # City of Wollongong
- # City of Shellharbour
- # Municipality of Kiama
- # University of Wollongong
- # ICT Illawarra/i3Net
- # NSW State Government
- # Australian Government
- # Major Employers
- # Industry Peak Bodies
- # Industry Associations/Clusters

Efforts should be made to engage business groups, peak bodies and non-government organisations in the implementation of this plan. Each industry and sector will require leadership from within their own industry. Every enterprise and service provider will benefit from the leadership exhibited by others in their sector across the region.

Leadership will mean long-term collaboration between many organisations and consistent effort towards clearly articulated goals.

| PN | Project/Action | Scope/Approach | Timeframe/Horizon | Contributes to Goals |
|---|---|---|---|---|
| 1.1 | Commit to a digital future. | RDAI and LGAs should agree to operationalise the #IllawarraDigital within the constraints of resources provide active ongoing support for its promotion and implementation. Over time they should align other regional strategies and programs with #IllawarraDigital. | Short | All goals. |
| 1.2 | Establish leadership and governance arrangements | Pending current deliberations around local government reform and the potential for a county council model emerging RDAI and LGAs should establish appropriate leadership and governance arrangements. An executive in each of the RDAI and LGAs should have clear leadership responsibilities. The governance arrangements should include a regional management committee with membership from each LGA. | Short | All goals. |
| 1.3 | Seek partners and funding | RDAI and LGAs should promote #IllawarraDigital to potential partners and funders including federal and state governments. For some actions, they should consider possible partnerships with other regions throughout Australia that are implementing their own digital strategies. | Short - Medium | All goals. |
| 1.4 | Promote the region's digital future | RDAI should promote the region's digital future through online and other channels to local residents, potential new residents, local businesses, potential new businesses and digital program partners. Compelling messages should be promoted about the future that the region aspires to, and the strategies, programs and resources that will help achieve that future. | Short - Medium | All goals. |
| 1.5 | Develop executive capacities and understandings | RDAI should establish or facilitate programs to develop the strategic capacities and understandings about digital technologies and their opportunities by executives and elected members of the LGAs and RDAI. The programs could be arranged in conjunction with other organisations including RDA Illawarra. | Short - Medium | All goals. |
| 1.6 | Investigate opportunities to share technology systems | RDAI and LGAs should investigate the opportunities to share the management, operation and use of key technology systems between the LGAs. The systems that could be shared may include new software systems, or cloud based services, required to support some of the projects/actions proposed in this report. | Short - Medium | All goals. |
| 1.7 | Monitor progress | RDAI and LGAs should develop regional digital development measures and then monitor progress against those measures. | Short – Medium - Long | All goals. |
| 1.8 | Actively promote NBN take up to households. | RDAI and LGAs should work together to promote the take up of NBN services in Illawarra households. | Short-Medium | All goals. |

## 2. Capacity Building: Build digital capacity in the region's key sectors.

Through long-term effort and more recent funding available through the Digital Enterprise Program the Illawarra region, particularly in Kiama, has made some progress towards building digital awareness and capacity in key industry sectors at enterprise level.

- A quarter of Illawarra businesses (24.9%) have a mobility (i.e. tablet based computing) strategy in place.
- Large businesses were more likely to report having a mobility strategy (60.0%), compared to small (20.7%) or medium (34.9%) sized firms.
- 37.3% of Finance, Property & Business Services firms had a mobility strategy. 23.8% of Retail & Recreation businesses reported having a mobility strategy.
- 17.1% of Manufacturing businesses and 15.6% of Construction firms indicated the presence of a mobility strategy.
- 48.9% of local firms are preparing to spend at least some of their funds on IT during the March 2013 quarter.
- Four in five business owners or managers (79.2%) said that they do not integrate their mobility-based apps to their business data.

While the Digital Enterprise Program will go some way to addressing capacity building needs of Illawarra business it will only scratch the surface of what is required to reach all enterprises. While current programs will go some way to building industry capacity the long-term challenge for the Illawarra is to build self sustaining programs that are seeded by regional bodies but which significantly exceed previous programs' inroads into enterprise and sector level digital capacity building. Through a range of integrated approaches the Illawarra should build self-referential, sustainable industry-led networks, events and knowledge sharing and align those efforts to a bold set of five-year goals.

The #IllawarraDigital strategy proposes that the following steps will need to be actioned by a lead agency:

- Determine the key sectors on which to focus capacity building activity based on economic opportunity, maturity, size and scope.
- Assign each of the key sectors to a lead agency – i.e. an LGA or RDAI to lead the capacity building activity.
- Build a common approach to capacity building across each of the targeted sectors so that the knowledge is reusable.

In determining which sectors the region and each LGA should focus on it is worthwhile considering the data available. The Australian Bureau of Statistics data shows that the top eight employment sectors of the Illawarra region are, in order:

- Health Care and Social Assistance
- Manufacturing
- Retail Trade

- Building & Construction
- Education & Training
- Public Administration & Safety
- Transport Postal & Warehousing
- Mining

Not identified by ABS statistics directly but of high importance to the City of Wollongong and the whole of the Illawarra region are Knowledge Based Industries including the ICT sector.

With this in mind stakeholders must consider which of these industries to focus effort on for the short, medium and longer term. Industry sectors such as manufacturing are vital to the region and potentially face decline without innovation – making a strong argument to focus resources on building digital capacity in this area.

Economic growth will ultimately be driven in the digital economy at the enterprise level. On a practical level that might be a business able to reach new markets, build new products, communicate with customers in new ways, reduce costs or improve productivity. However, without the capacity, skills and human capital individual enterprises in the Illawarra will struggle to take full advantage, and mitigate some of the threats, of a digital economy.

Access Community Group (ACG) is a not for profit organisation providing opportunity and community development across the Illawarra, South Coast and Southern Highlands. ACG works with some of the most disadvantaged and disengaged community members

ACG is an innovative organisation constantly looking for ways to connect more effectively with clients, making caseworker jobs easier as well as keep up with what's happening both in the sector and across the globe

Digital technologies have assisted ACG with both of these things, and there is a very active role for technology in the organisation.

From an employer point of view, all of ACG's staff operate off laptops and smart phones. This enables workers to work at any location, access the internet, emails and into cloud based computing services.

Employees also use business social networking tools like yammer as a point of sharing information, successes and questions. ACG have a presence on most forms of social media and regularly update these forums for clients and stakeholders.

ACG have mobile classrooms that they can take anywhere, and recently delivered training out of Stocklands Shellharbour.

| PN | Project/Action | Scope/Approach | Timeframe/Horizon | Contributes to Goals |
|---|---|---|---|---|
| 2.1 | Identify priority industry sectors regionally and sub-regionally | While there is extensive ABS data related to the most significant industry sectors operating within the Illawarra economy there are other factors that should be considered by stakeholders in determining the priority sectors. Sub-regional, regional and state alignment should be taken into account as well as capacity for councils and other regional bodies to act. Each priority sector identified should have clear leadership defined on capacity building activities over the medium to long term. The following sectors should be considered highest priority: Health Care and Social Assistance, Manufacturing, Retail Trade, Building & Construction, Tourism, Food, Arts & Culture, Knowledge Services. | Short | 1.1, 1.2, 1.3, 2.2 |
| 2.2 | Align capacity-building programs to a single bold goal | The Illawarra should collectively establish and promote a single bold goal that current and future capacity building programs can align to. The region should take a baseline snapshot of the current measure of this goal and regularly report against it. For example, the region may consider the following goal: That 75% of all Illawarra businesses and service providers will have a clearly articulated digital strategy by 2018. All programs, activities and promotions over the next five years should align with that simple goal. | Short – Medium - Long | 1.1, 1.2, 1.3, 2.2 |
| 2.3 | Seed self-referential online industry networks | Using freely available wiki/social/knowledge sharing online software platforms the lead organisation should 'seed and feed' an online participatory sector based network for each priority sector. The network would be a way for enterprises to access knowledge, share information and find answers to key digital questions locally and with input from other sources. The network would also be used to promote the narrative and events such as expos. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 2.4 | Engage and educate peak industry bodies | Each lead organisation should engage the key local, regional, state and national industry bodies in the above goal setting and activities to support the sector. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 2.5 | Actively seek funding from programs such as the Digital Enterprise Program | The Illawarra should continue to seek funding from state and federal programs where possible. Already Kiama has successfully rolled out the Digital Enterprise Program and there is a current opportunity for Wollongong to do the same. The state and federal governments also fund industry specific digital capacity-building programs. #IllawarraDigital leadership should keep a watching brief on such programs, apply for all of them and align the delivery to the goals of this plan. | Short | 1.1, 1.2, 1.3, 2.2 |

## 3. Lighthouse Projects: Identify and build 'lighthouse' projects in each of the region's key sectors.

For each key sector the lead organisation should work with industry and government stakeholders to create a compelling narrative and digital vision for that sector. Priority action under this strategic grouping may include the identification of local champions, development and distribution of their success stories to others in the sector

Further, RDA Illawarra and the three Councils should work to identify opportunities to seed enterprise level lighthouse projects that can inform and inspire other enterprises in the sector. For example a Centre of Excellence that engaged the local manufacturing industry in 3D printing may be an opportunity for a lighthouse project in that sector.

By establishing a food, wine, art and culture "online trail" through the region, home-based businesses, farm-gates, galleries and "pop-up" shops featuring craft, art and local produce would have a channel through which to promote local product and build their own online capacity to deliver.

The consultation has provided evidence that retailers in the Illawarra are under-prepared for the multi-channel approach required for retailers to survive and thrive growth in online retail. By developing an Illawarra online retailers network – effectively a virtual shopping mall of Illawarra-based retailers – the region would build skills and potentially access new markets online.

### An Opportunity to build a 3D Printing Centre of Excellence in the Illawarra…

Recent positive news that UOW graduate Rhys Cornock has been chosen to spearhead a new 3D printing unit at Melbourne's St Vincent's Hospital demonstrates the potential for the region to take a national lead on 3D printing technologies.

Rhys will lead a team of specialist technicians that will conduct cutting-edge research into areas such as bone regeneration and controlled delivery of anti-epilepsy medication and other drugs into the brain.

The current 3D printing facilities at UoW are second to none in research in Australia. 3D printing is the single most important technology that will drive transformation, innovation and renewal in the manufacturing sector worldwide.

The Illawarra has the opportunity to be at the forefront of this technology and its applications in manufacturing SMEs, and to play a globally significant role in technology transfer to industry.

Australian Government's Industry Innovation Precincts will be led by industry and will help businesses and researchers collaborate, share knowledge, deploy technology, create products and services and take advantage of business opportunities.

Each Precinct will have headquarters in a specific location, but they will focus nationally to better coordinate existing services and research capacity. They will provide new tools and services to enable Australian businesses to invest, innovate and grow.

| PN | Project/Action | Scope/Approach | Timeframe/ Horizon | Contributes to Goals |
|---|---|---|---|---|
| 3.1 | Consider and identify a major lighthouse project for each priority sector. | The following sectors should be considered highest priority: Health Care and Social Assistance, Manufacturing, Retail Trade, Building & Construction, Tourism, Food, Arts & Culture, and Knowledge Sectors. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 3.2 | Create and promote a compelling narrative for each priority sector. | For each priority industry sector the lead organisation should work with industry and government stakeholders to create a compelling narrative and digital vision for that sector. The lead organisation and other stakeholders should:<br># Acquire and distribute content relevant to the specific sector directly and via other capacity building programs<br># Organise and host an annual or bi-annual Expo specifically focused on the sector and its digital needs<br># Identify local champions and develop and distribute their success stories to others in the sector<br># Create and promote case studies of successful digital strategies at enterprise and organisation level and share them via the sector network proposed at 2.3. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 3.3 | Develop and maintain an active opportunity register for Lighthouse Projects | For each industry sector the #IllawarraDigital leadership group should develop and maintain an active opportunity register that documents potential lighthouse projects and their relative priorities. The register should then be used to actively seek Federal, State, industry and University funding to progress priority projects. The register may wish to consider work on the some of the following potential Lighthouse Projects<br><br>1. A 3-D Printing Centre of Excellence stimulating collaboration, industry focused research and technology transfer between the University of Wollongong's current 3D Printing facilities and a network of local manufacturing enterprises. There is potential to attract funding for this Lighthouse Project from the Australian Government's Innovation Precincts program.<br><br>2. The development of a food, wine, art, culture trail and supporting app that attracts visitors to the galleries, farm-gates, historic and retail outlets through the region.<br><br>3. An online shopping mall that provides the tools, infrastructure and traffic to a network of existing Illawarra based retailers and promotes them with an innovative and high profile online retail presence.<br><br>4. Create an annual signature event that incorporates the digital, music and arts sectors, as part of a multi-day, multi-venue festival that targets the professional community and promotes the region's competitive advantages in the digital sector. | Medium | 1.1, 1.2, 1.3, 2.2 |

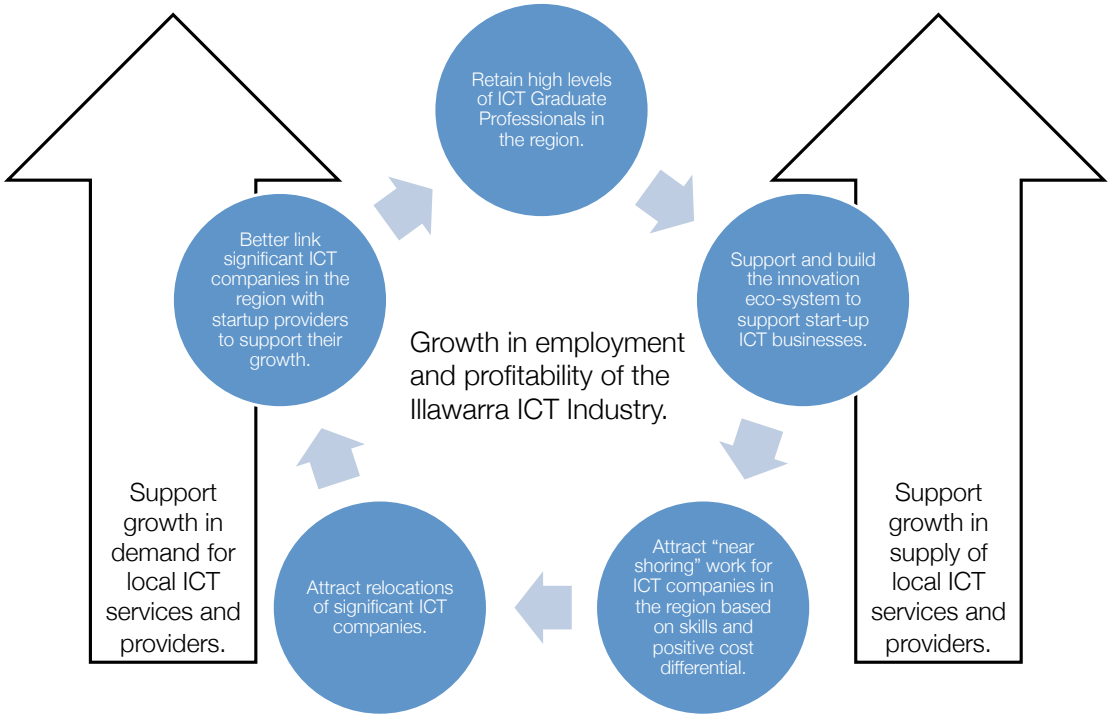
## 4. ICT Sector: Accelerate the growth of the Illawarra ICT sector.

The region, particularly through the University of Wollongong has demonstrated national leadership in creating a clear innovation ecosystem to drive growth in ICT start-ups. With 9% of all of Australia's ICT students graduating from the University of Wollongong, and other significant institutions focused on ICT in the Illawarra, this leadership should be built upon in this strategic area. Actions in this strategic grouping include these recommendations:

- Continue to build on the high levels of supply of graduate ICT professionals and work to retain them to live and work in the region
- Supporting and building on the existing innovation ecosystem supporting ICT startups and linking strongly with industry
- Attracting "near shoring" opportunities for existing ICT businesses to support their growth particularly from Sydney-based business, and
- Attracting re-locations and investment by significant ICT sector businesses to the region.

The peak industry body for ICT in the region, ICT Illawarra, has developed a comprehensive strategy map to guide their role in growing the sector. This strategy map should be well understood by RDAI and Councils and integrated with their own efforts.

The University of Wollongong (UoW) delivers one of most successful ICT programs in Australia. Post Global Financial Crisis enrolment in ICT courses across the country decreased by 47%.




During this period the UoW has increased its market share to produce some 9% of all of the national ICT graduates and some 25% of NSW's ICT graduates. Anecdotal evidence suggests that a significant proportion of these graduates head straight to Sydney or other markets at the conclusion of their studies. While UoW has been concerted in its efforts to retain graduates and create opportunities for them through programs like iAccelerate, more needs to be done.

Hackagong is a weekend-long "hackathon" competition where people with designer, developer and/or business skills form teams and build something cool from start to finish in 48 hours. Teams demonstrate and pitch their creations to prominent judges who award prizes to the best entries.

Events led by startup community members and supported by industry and Councils will encourage more connections and startups to form in the region (particularly among students) to help generate a vibrant local startup ecosystem and culture.

Engaging industry sponsors from established local and national ICT enterprises will drive better local job placement and local procurement outcomes. Councils could use events such as these to drive “app” development outcomes with a small investment in prize money.

The first Hackagong event was a success with numerous startups created and some still operating. The winning team, "KickStart Kristmas", is still operating in Wollongong under the new name of Giftling.

The current UoW innovation ecosystem that lends support to ICT start-ups is strong and comprehensive. The suite of iAccelerate programs are designed to provide key elements recognised as critical in the development and launch of fast growth technology

focused startup businesses.

However, while this ecosystem should be supported and promoted there are still multiple pathways to be developed that could support start-ups and a start-up culture in the region.

CriticalArc, a resident of the University of Wollongong’s iAccelerate StartPad business incubator, recently won the prestigious StartUp Trophy at SydStart 2013, Australia’s largest professional startup conference.

Selected as one of 12 finalists from a field of 100 applicants, CriticalArc outshone the competition and was declared the winner by the judging panel. Pitching criteria included what makes the team likely to win globally; the addressable market; points of difference; traction to date; and why the startup will stay ahead of the pack.

CriticalArc’s founder Glenn Farrant says “Being part of iAccelerate StartPad has given us a number of advantages including the credibility that comes from being selected as one of the incubator’s residents through a competitive process, and mentoring by business people who have been able to advise on the steps we need to take and the pitfalls to avoid as our business grows. StartPad has meant we are part of a community where we can share learnings with people who are doing similar things.”

| PN | Project/Action | Scope/Approach | Timeframe/ Horizon | Contributes to Goals |
|---|---|---|---|---|
| 4.1 | Continue to build on the high levels of supply of graduate ICT professionals. | Continue to build on the high levels of supply of graduate ICT professionals and work to retain them to live and work in the region. RDAI and Councils should consider working with the UoW to promote ICT courses to attract more overseas and non-Illawarra based students to enroll. RDAI and Councils should also work closely with UoW to provide multiple pathways to local employment for ICT graduates. Pathways are created through the iAccelerate program suite and should be expanded to include strong pathways to existing local businesses through job expos, placements and networking. | Short-Medium-Long | 1.1, 1.2, 1.3. |
| 4.2 | Support and build the existing innovation ecosystem to support ICT start-ups. | RDAI, ICT Illawarra and UoW should support and build on the existing innovation ecosystem supporting ICT startups. Further, this innovation ecosystem should be better linked with the local ICT industry through a range of opportunities such as sponsorship and networking opportunities. | Short-Medium-Long | 1.1, 1.2, 1.3. |
| 4.3 | Attract "near shoring" opportunities for existing ICT businesses to support their growth particularly from Sydney based business. | Building on Council and regional initiatives such as Advantage Wollongong the region should actively support local ICT businesses in attracting "near shoring" opportunities. Illawarra ICT businesses attending Sydney and other market trade and networking events under the branded initiative should focus on cost differentials and skills base. | Short-Medium-Long | 1.1, 1.2, 1.3 |
| 4.5 | Endorse the ICT Illawarra Strategy Map and formally engage with the Peak Body. | ICT Illawarra have developed a clear strategic map to govern their activities and efforts in growing the sector. RDAI and the three Councils should acknowledge this strategy map and integrate efforts with ICT Illawarra. | Short-Medium-Long | 1.1, 1.2, 1.3 |
| 4.6 | Actively procure ICT services and products from Illawarra based businesses. | Subject to legislative and procurement requirements councils should continue to develop an appropriate local procurement policy when sourcing ICT support, content, development and services. | Short-Medium-Long | 1.1, 1.2, 1.3 |
| 4.7 | Brand efforts to build the Illawarra ICT Sector and promote the brand nationally. | Regional bodies and the peak body should consider the development of a specific Illawarra ICT industry brand. "Silicon Beach" has been suggested. The branding should be considered to promote the region and support the actions above. It should be noted that Wollongong has already adopted the branding "Wollongong is IT". | Short-Medium-Long | 1.1, 1.2, 1.3, 2.3 |
| 4.8 | Consider and investigate the feasibility of a small-scale angel-investment network. | Regional bodies should consider building on the work of the iAccelerate program by providing some seed funding for an Angel Investment Network – structured as a Not For Profit dedicated to learning about investing, best practice, membership and outreach, events, etc. to increase the confidence of local business people to invest in the new start ups coming out of the UoW and region | Short-Medium-Long | 1.1, 1.2, 1.3, 2.3 |

## 5. Telework: Transform the work patterns and accelerate efforts to make the Illawarra a 'telework' leader.

Thanks to advances in technology, work no longer needs to be tethered in time or place. Commonly known as telework—any substitution of technology for business travel, or telecommuting—employers, employees and communities are slowly learning that they are not constrained as to where and when work is done.

NSW Government Agencies occupy expensive real estate in Sydney. Over 20,000 people commute daily to Sydney from Wollongong and the Illawarra Region. Relocating Government agencies and staff to Wollongong is a win-win solution for both the NSW Government and the local economy. A commitment from the NSW Government would provide and anchor tenant for a major telework centre in Wollongong and potential for smaller centres in Shellharbour and Kiama. In turn this investment would stimulate the local property market, the local economy and enhance the lifestyle aspects of attracting new residents to the Illawarra.

A significant number of employed people who live in the Illawarra leave the region each day to attend a workplace in greater Sydney. By building infrastructure and affecting cultural change a greater proportion of these people would work from home, in the smaller centres of Kiama or Shellharbour or would commute to the centre of the City of Wollongong.

A greater number of people teleworking for a greater number of days will drive growth in the local economy, ease the pressure on transport infrastructure, improve the 'lifestyle' attraction of the region and reduce costs for Government and industry. The region should set a bold target to increase numbers of teleworkers in the region and partner with Government and industry to build infrastructure that would support that goal.

RMB Lawyers are the largest law firm in regional NSW and have adopted a “near-shoring” strategy effectively making their staff “teleworkers” servicing the Sydney market. With offices in Wollongong, Kiama, Nowra, Dapto, Barrack Heights and Bowral RMB handle matters ranging from complex commercial arrangements and planning disputes to sensitive personal issues.

RMB have built and deployed their own smart phone app and are reliant on high-speed telecommunications to ensure the cost differential they offer the Sydney market in services like legal discovery remains competitive.

A recent report by the Telework Research Network found that part-time telecommuting by the 4.3 million Canadians with compatible jobs and a desire to work from home could have a bottom line impact of over $53 billion per year. An employer with 250 telecommuters, for example, would save over $3 million per year.

It is this potential significant saving to major employers, particularly Government located in Sydney, that forms the cornerstone of a business case for telework infrastructure in the Illawarra region. The New South Wales State Government’s stated decentralisation aspirations that will potentially see more state public servants

located in regions like the Illawarra, provide an 'anchor tenancy' for a major telework centre located in the region.

Smaller centres in the region will take advantage of a large telework centre in the region by promoting the major lifestyle advantage of living locally and working more often locally, rather than commuting to Sydney. As cultural change takes hold smaller centres will also be able to offer sustainable telework centres, which will provide further productivity improvement.

Australian accounting software firm MYOB commissioned a survey about tele-working practices in 1,005 Australian small businesses.

Some 25% of firms said that their employees worked "mainly away from the office" and 32% said that their employees "worked partly from home and from the office".

Businesses whose employees worked mostly from a location other than business premises were 24% more likely to see a revenue rise in the last year and were 32% less likely to see a revenue fall.

Key benefits experienced by the businesses with staff who tele-work include improved employee satisfaction, travel savings, reduced overheads, increased productivity and reduced carbon footprint.

With Sydney and its surrounding cities and regions struggling to keep up with infrastructure costs, now is the time to consider innovative and modern approaches to addressing road and transport issues. The potential benefit for the region will be many more workers working within the region, providing the obvious flow-on economic effects to the retail and services sector.

Further to this, Australian businesses are starting to consider 'near-shoring' as an alternative to off-shoring. The term near-shoring refers to enterprises outsourcing parts of their operations such as call centres, para-legal, financial, secretarial or other services to geographically close locations with relatively lower costs. The Illawarra is ideally positioned, with appropriate teleworking infrastructure and culture, to provide near-shore services to businesses in Sydney who are facing increasing staff- and property-related costs.

Home-based businesses are also effectively engaged in telework. By building the capacity of home-based businesses to reach new markets and networks the region will see more businesses establish and grow.

*"I want to live by the beach but enjoy all the opportunities for professional growth and career that I would get in Sydney. High speed telecommuting services would mean I could live here and raise my kids here out of the rat race of Sydney.*

*- Workshop participant, Wollongong*

| PN | Project/Action | Scope/Approach | Timeframe/Horizon | Contributes to Goals |
|---|---|---|---|---|
| 5.1 | Measure a baseline and set a bold teleworking target for the region | The Illawarra should rapidly collect data on current workforce mobility and telework activity as a baseline to measure progress over the medium to long term. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5 2 | Consider working with other regions and experts advice. | RDAI should work with its counterparts in other "satellite city" regions to develop a comprehensive understanding of the business case and sustainability for telework centres – particularly focused on telework centres located regionally with state government as an anchor tenant. RDAI and Councils should consider becoming a partner in the Department of Broadband's Telework Network. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5.3 | Actively plan for Government offices as an anchor tenant | RDAI and stakeholders should build a strategy to communicate with state government the opportunity available for a major telework centre to State Government. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5.4 | Develop feasibility studies for smaller centres | While initial focus should be on building the case for a major regional telework centre in the City of Wollongong RDAI should lead studies in conjunction with councils for smaller telework centres in the key towns in the region. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5.5 | Actively promote teleworking to major employers in Sydney | While initial effort should focus on State Government as an anchor tenant data should be researched on other key employers in the Sydney area that may consider teleworking, near-shoring or other forms of flexible working that could benefit the Illawarra. Communications material and marketing collateral should be developed in conjunction with a communications and promotion strategy. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5.6 | Develop networks for home-based businesses | Home based businesses represent a growing sector of small to medium enterprises and microbusinesses in the Illawarra region. Building on the work of the regional small business clubs and employing a similar set of actions to those described in the Capacity Building section of this strategy the RDAI should lead capacity building and promotion of this sector. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5.7 | Councils to investigate telework policy for council officers | Individual councils should investigate the barriers to leading the region by developing and adopting their own telework policy for council officers. | Medium | 1.1, 1.2, 1.3, 2.2 |
| 5.8 | Advocate and negotiate for tele-work in the region | The key regional bodies should advocate and negotiate with major public and private sector employers to support tele-work by their employees who live in the Illawarra Region. | Medium | 1.1, 1.2, 1.3, 2.2 |

## 6. Mobility: Extend access to digital infrastructure - with a focus on mobility.

The importance of mobility and ubiquitous high-speed connectivity to the region cannot be overstated. All industry sectors including tourism, transport, logistics, education, health and community services, and manufacturing will increasing rely on mobility to drive service innovation and productivity growth.

The region should actively build on its current mobile and wireless infrastructure in order to maximise productivity and opportunities for the future. Digital infrastructure should be extended so that there are more public outdoor spaces and shared indoor spaces where people who are working, learning or enjoying their leisure time can access broadband services, particularly through mobile devices. Further, all regional bodies should align their lobbying and planning efforts towards extending wireless and mobile infrastructure in the region.

Ubiquitous mobile connectivity is driving change to the way we work, the way we communicate with customers and the way we solve old problems faster than any other technology ever has – it will lead to more efficient business models and improved lifestyles for individuals and society.

As wireless capabilities become increasingly integrated within computer chips, the benefits of the computing world – innovation, short development cycles and low cost – are extending into mobile communications. As a result, traditionally unconnected devices are becoming connected – varying from smartphones, to cars and industrial machinery to farmland equipment. Increasingly the geo-spatial data that can be associated with a mobile device will drive changing business models in many sectors.

Ubiquitous mobile connectivity is becoming increasingly important in tourism, hospitality, agribusiness and education. Those regions most likely to benefit over the next decade are those which understand this global mobility trend and build appropriate infrastructures and applications to support and augment mobility.

We live in a mobile world. That much is obvious. The momentum has shifted steadily in favour of gadgets and services that are portable or mobile and those that deliver networking capabilities and entertainment. And that's changing the way we live in profound ways that you might not have even noticed yet.

According to research company, Gartner, the most profound changes are occurring in the way people organise their lives and the spaces they live in. "Early adopters tend to leave the home laptop in the bag and are abandoning the home office in favour of the lounge room couch or bedroom to do online activities in a more comfortable environment using a tablet or smartphone," says Nick Ingelbrecht, research director at Gartner.

The falling price of mobile technologies also means that, although we're collectively spending less on these devices, they're becoming increasingly pervasive. "This early adopter trend is becoming mainstream consumer behaviour", says Ingelbrecht. "Consequently, technology and service providers are faced with no alternative but to innovate for mobility. If they do nothing, they face a potential train wreck as consumers abandon gadgets, services and applications that do not fully support changing mobile lifestyles."

| PN | Project/Action | Scope/Approach | Timeframe/Horizon | Contributes to Goals |
|---|---|---|---|---|
| 6.1 | Mobile black-spots and capacity report card | Identify mobile black-spots and capacity issues across the region by investing in an annual or bi-annual study and publicly reporting on the results. The data sets attained through this process should be made available publicly and for free as per the Open Data strategy group below.<br><br>The RDAI and Councils may consider co-investing in this regular update and use the data strategically to positively affect telecommunications providers to partner with the region to provide better and faster mobile coverage over time. | Medium | All goals |
| 6.2 | Mobile towers community engagement & planning | The Councils should research and investigate a best practice approach for planning scheme code development and community engagement in the establishment of locations of mobile tower infrastructure. This will ensure the growing demand for mobility and mobile infrastructure is facilitated by effective engagement with mobile network providers. | Medium-Long | All goals. |
| 6.3 | Create /Co-ordinate Wi-Fi hotspots | Building on work already implemented, Wi-Fi hotspots should be considered in key locations of towns throughout the region. Actions should include: the identification and mapping of existing Wi-Fi hotspots throughout the region. The region should develop a common brand to promote/publicise existing Wi-Fi hotpots or when creating new Wi-Fi hotspots.<br><br>RDAI and Councils should investigate partnerships with telecommunications carriers for Wi-Fi hand-off and small cell creation and should investigate ability for Wi-Fi infrastructure to be installed on street lighting, street furniture or other council-owned facilities. | Short-Medium | All goals |
| 6.4 | Create, aggregate and distribute relevant local content via mobile hotpsots. | The hotspots should be configured so as to support online activities including: Providing immediate and up to date information about the locality to visitors, delivering immediate and up to date local information for the community, widening access to online education resources by students of all ages, providing access to other important government, community and commercial online services and creating valuable mobile digital access for businesses and their employees. | Short-Medium | All goals |
| 6.5 | Investigate a pilot a Free WiFi, access network in areas of disadvantage | As an Australian first the Councils should work with social service providers to provide a free WiFi access network in disadvantaged areas. Service providers coluld work with UoW to create a research project into the project outcomes. | Medium | All goals |
| 6.6 | Extend the digital infrastructure of community use centres | The region's community use centres, libraries and other community facilities should be given stronger roles in enabling all residents to have access to online services and digital resources. These stronger roles should be developed through measures including the provision of: free W-Fi within each facility (if not already provided), mobile tablet devices for loan use within key facilities, access to a rich array of online resources, particularly educational resources, effective technical support should be provided for the facilities by councils. | Medium | All goals. |

## 7. Open Data: Accelerate efforts to make the Illawarra an 'Open Data' leader in Australia.

Open data often refers to government information that has been made available free for anyone to use. Sharing of government information as open data without cost will benefit individuals, communities, companies and the whole region. Giving free access to government data will be good for the regions' enterprises. It will breed new markets and support innovation.

Increasing data openness makes it easier to use for other government and regional agencies in planning for the future. Open data may also help in finding practices where the potential of digital information hasn't yet been realised. Some effort has already been committed to better sharing and openness of data across the region's public sector bodies. The RDAI should lead in the acceleration of effort to see the Illawarra recognised as an Australian leader in open data. Open data is a potential resource for the Illawarra region to broaden and grow the economic base that is, as yet, largely untapped. Many individuals and organisations collect a broad range of different types of data in order to perform their tasks. Government, at all levels, is particularly significant in this respect, both because of the quantity and centrality of the data it collects, but also because much of that government data is public data by law, and therefore could be made open and available for others to use.

There are many different groups of people and organisations that could benefit from the availability of open data, including government agencies themselves. At the same time it is impossible to predict precisely how and where value will be created in the future. The nature of open data innovation is that developments often come from unlikely places.

*Floodwatch*: New Zealand's Marlborough District Council's Open Data project

In 2011 New Zealand's Marlborough District Council (MDC) embarked on an Open Data project called Floodwatch, providing real-time rainfall and river condition data in an easy-to-read map format to the public, council and contractors. It uses three datasets:

- River flows – measured in cubic feet/metre, includes information on the flow rate of the region's rivers, both actual (last 24 hours) and forecast (future 6 hours).
- River levels – measured in metres, includes the current height of the region's rivers.
- Rainfall – measured in millimetres, includes rainfall totals for user-designated hourly timeframes.

The project took six months, leveraged existing MDC software and hardware solutions and had minimal implementation costs.

The public and businesses in the Marlborough region can use Floodwatch data and resultant flood risk analysis for their properties to inform their interactions with other government departments.

Members of the public can actively monitor real-time data and thresholds from Floodwatch during flooding events, to take proactive and efficient actions to protect lives and property.

Taken over time, Floodwatch data can reveal flood risk in the region, which can be used to guide smart planning and development in the area.

Floodwatch data provides the public with a clearer picture of the spatial distribution of flood events and risk. This encourages informed and active participation in government policy development, particularly disaster management.

The success of Floodwatch and its use of existing technology solutions have spurred planning for similar online data delivery systems. An application using river flow and aquifer data is being planned to support water takes and entitlement management in the region. This could generate greater public involvement in this policy area.

Open government data can create value in many ways, including:

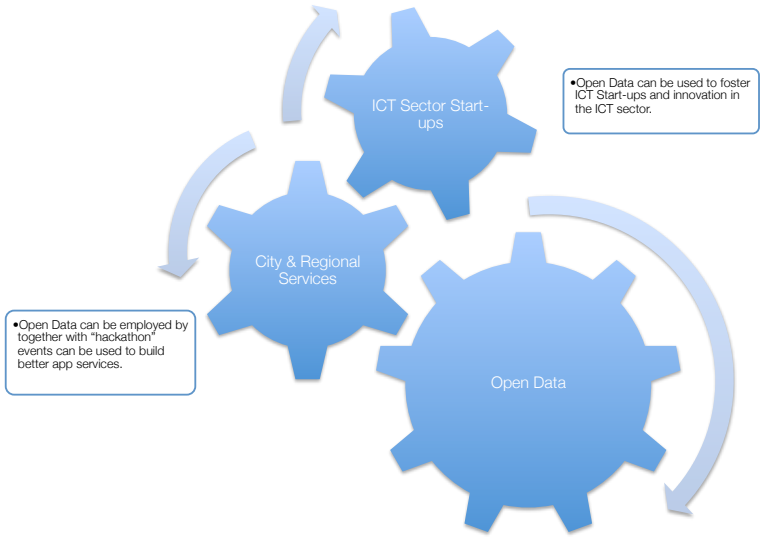
- Transparency and democratic control
- Participation and self-empowerment of citizens
- Improved or new private products and services
- Innovation
- Improved efficiency and effectiveness of government services
- Measurement of the effect of policies
- New knowledge from combined data sources and patterns in large data volumes.

Projects such as the Finnish 'tax tree' and British 'where does my money go' (http://wheredoesmymoneygo.org/) show citizens how their tax money is being spent by the government.

Open government data can help residents of a region to make better decisions in their own lives, enable them to be more active in society, and to solve their own problems. A woman in Denmark built findtoilet.dk, which showed all the Danish public toilets. A similar project in Australia is the National Public Toilet Map: http://www.toiletmap.gov.au/

In the Netherlands a service, vervuilingsalarm.nl, warns you with a message if the air-quality in your vicinity is going to reach a self-defined threshold tomorrow. In New York there is an application that show you where you can walk your dog, as well as to find other people who use the same parks.

Economically, open data is of great importance as well. Several studies have estimated the economic value of open data at several tens of billions of Euros annually in the EU alone. New




products and companies are re-using open data to access new markets and create new products.

Connecting open data to the people most able to economically exploit is potentially the seed for innovative new business streams in the Illawarra.

Open data is also of value for government itself. For example, it can increase government efficiency. The Dutch Ministry of Education has published all of their education-related data online for re-use. This resulted in a significant drop in the number of questions they receive, reducing work-load and costs. Open data is also making government more effective, which ultimately also reduces costs.

| Number | Project/Action | Scope/Approach | Timeframe/Horizon | Contributes to Goals |
|---|---|---|---|---|
| 7.1 | Develop a shared business case for open data across councils and other Government agencies | Councils should work with RDAI to develop a detailed business case (incorporating potential regional economic benefits) for moving to an open data regime across the region. The business case would include the case for creating a single online entry point and repository for the regions open data sets. | Long | All goals. |
| 7.2 | Identify a single pilot regional data set to release and create an innovation opportunity | In parallel with developing a more structured business case stakeholders should identify a small number of regional data sets to release and promote to those most likely to innovate using that data.<br><br>The first of these data sets should be related to land available for potential development in the region and should be promoted via engaging graphical online interfaces to the Sydney and national investment community. | Medium | All goals. |
| 7.3 | Drive data sharing and publication through events and networks | RDAI should lead in bringing together regional organisations to share open data sets and at 'data party' events and networks that enhance the connectivity and collaboration of regional organisations. | Medium | All goals. |
| 7.4 | Drive and promote innovation through access to Open Data | Through events like 'hackerthons' and 'coding parties' the RDAI and Councils should promote the use of open data and the potential impacts on driving innovation and creating new opportunities. This could be delivered in conjunction with local educational institutions and could offer small sums of prize money to build applications with local use at a low cost. | Medium | All goals. |

## 8. Online Services: Accelerate efforts to build better Government and Community online services.

All three councils in the Illawarra region have demonstrated leadership in some areas of online services. Building on this leadership Councils should work together and deliver better online services through sharing knowledge, potentially implementing shared systems where appropriate and engaging the community through a single region-wide online consultation platform and standards. While systems and technology will be important in this change – cultural change with councils demonstrating a "think online first" principle will be as important.

### Getting folks in a room: Unconferences, Meetups and Barcamps…

Face-to-face events can be a very effective way to encourage others to use your data. Reasons that you may consider putting on an event include:

- Finding out more about prospective reusers
- Finding out more about demand for different datasets
- Finding out more about how people want to reuse your data
- Enabling prospective reusers to find out more about what data you have
- Enabling prospective users to meet each other (e.g. so they can collaborate)
- Exposing your data to a wider audience (e.g. from blog posts or media coverage that the event may help to generate)

There are many ways of running events, and different types of events, depending on what you want to achieve. As well as more traditional conference models, (pre-prepared formal talks, presentations and demonstrations etc), there are also various kinds of participant driven events, where those who turn up may:

- Guide or define the agenda for the event
- Introduce themselves, talk about what they're interested in and what they're working on, on an ad hoc basis
- Give impromptu micro-short presentations on current projects
- Lead sessions on something they are interested in

There is plenty of documentation online about how to run these kinds of events, which you can find by searching for things like: 'unconference', 'barcamp', 'meetup', 'speedgeek', 'lightning talk', and so on. You may also find it worthwhile to contact people who have run these kinds of events in other countries, who will most likely be keen to help you out and to advise you on your event. It may be valuable to partner with another organisation (e.g. a civic society organisation, a news organisation or an educational institution) to broaden your base participants and to increase your exposure.

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| Number | Project/Action | Scope/Approach | Timeframe/Horizon | Contributes to Goals |
|---|---|---|---|---|
| 8.1 | Develop robust collaboration governance structures between Councils. | Councils should work together through agreed governance structures to share ICT strategy and where appropriate source common platforms for back end and citizen service delivery. | Short | 3.2, 3.3 |
| 8.2 | Source and deploy a common set of citizen engagement tools across the region. | Councils should investigate building or sourcing a common citizen engagement platform to engage the community online in deliberative discussion and decision making across all areas of life in the region. | Medium | 3.2, 3.3 |
| 8.3 | Source and deploy a common set of planning and development tools and platforms, to be integrated with an open data regime. | Councils should consider building or sourcing a common development application and planning approvals online system. In time an open data regime, together with an integrated online approach to planning and development, will drive greater and more informed investment in the region. | Medium | 3.2, 3.3 |
| 8.4 | Consider an “online first” content policy and investigate a common Social Media policy across the region. | Each council should Consider an “online first” policy for all information that is distributed to citizens. While other paper based or alternative channels should not be abandoned, the online channel via a suite of apps or web delivery should be the first place information is disseminated. Councils should develop a comprehensive policy to utilise common social media platforms for information exchange with citizens. Councils should share and where possible Consider a common social media policy. | Short | 3.2, 3.3 |
| 8.5 | Build on early successes. | Kiama Municipal Council was an early beneficiary of the Australian Government’s Digital Local Government Program. The Council has implemented some innovative platforms for online citizen engagement. Councils should actively share, through formally established working groups, the knowledge gained through early utilisationion of online solutions like this. | Short | 3.2, 3.3 |
| 8.6 | Mobilise council workers and integrate mobility with back end systems. | All council workers should progressively be “mobilised” through the deployment of mobile devices and platforms integrated with the back end financial and operations systems. | Short | 3.2, 3.3 |
| 8.7 | Utilise Open Data and “GovHack” type events to drive the development of a priority suite of regional, city and municipal apps. | Councils should investigate the development of a suite of apps to deliver information to residents and visitors at low cost through directed sponsorship of ICT industry events and programs like “GovHack”. | Short - Medium | 3.2, 3.3 |

# Focus areas for the City of Wollongong

The focus for Wollongong in developing and identifying a digital strategy should be on building on the nation leading work already underway, positioning Wollongong as a lower cost, high quality place to do business – particularly in knowledge industry sectors.

| Strategic Area | Strategic Focus & Regional Leadership |
|---|---|
| Leadership | Advantage Wollongong attracting opportunities to the City and region. |
| Capacity Building | Focus on Retail, Knowledge and Manufacturing sectors. Access to funding programs such as the Digital Enterprise Program. |
| Lighthouse Projects | Linked to priority areas outlined in Strategy, could include manufacturing sector & 3D printing, events based promotion for example. |
| ICT Sector | iAccelerate expansion and integration, near-shoring and investment attraction through Advantage Wollongong |
| Telework | Knowledge Industries, state government relocation, co-working hub. |
| Mobility | Black spots and content for Wi-Fi networks. |
| Open Data | Focus on land use data sets that will drive investment in the City and region long term. |
| Online Services | Expanded digital channels for delivery of city services to residents. |

The City of Wollongong has undergone significant change over the past decade and through good strategic decision-making has positioned itself well with knowledge-based industries central to future growth.

The City together with its stakeholders have committed to building a vibrant central business district based on knowledge industries and their intersection with education institutes and the traditional small-medium enterprise sectors.

Key programs such as Advantage Wollongong and University of Wollongong's iAccelerate have positioned Wollongong at the front of leading mid-sized cities in Australia in the knowledge industries sector. Ubiquitous high speed broadband and the identification of a clear digital strategy for the city will build on these successes and continue that momentum.

By building on these nation-leading programs Wollongong will be able to position itself as the leading digital mid-sized city in Australia. The priorities for Wollongong for the future should include:

- Build on Advantage Wollongong to grow the near-shoring and export opportunities for existing businesses while attracting more medium-large scale ICT businesses to the Wollongong area.
- Build on the iAccelerate innovation ecosystem and integrate investment in innovation and teleworking by the city to ensure linkages.
- Build on Wollongong's CBD revitalisation work by focusing on building digital capability in the retail, restaurant/cafe and hospitality sector.

# Focus areas for the City of Shellharbour

The priorities for Shellharbour in developing and identifying a digital strategy should be focused on the intersection of quality lifestyles, new work opportunities within the city and high-speed connectivity.

| Strategic Area | Strategic Focus & Regional Leadership |
|---|---|
| Leadership | Non-Government Organisation sector and aged care, quality living. |
| Capacity Building | Focus on NGOs and human and health services. Access to programs and partners such as the Digital Toolkits and InfoXChange. |
| Lighthouse Projects | Telehealth and social services provision. |
| ICT Sector | Attract a node of iAccelerate and other programs into a co-working space. |
| Telework | Home based businesses, co-working space with a focus on NGO and services sector. |
| Mobility | WiFi in disadvantaged areas. Blackspots and content for Wi-Fi networks. |
| Open Data | Focus on data sets that will improve lifestyles in the city and region long term. |
| Online Services | Expanded digital channels for delivery of city services to residents, land and maritime visitors. |

The City of Shellharbour has expanded rapidly and will continue to attract significant investment and population growth centered on the Shell Cove boat harbour and surrounding infrastructure.

The City together with its stakeholders have committed to building a highly attractive lifestyle destination that will ensure investment in property into the future.

Associated with the Shell Cove development is the development of a business and technology park. This technology park should be considered as central to Shellharbour's own digital future. Ubiquitous high speed broadband and the identification of a clear digital strategy for the city will build momentum and opportunity for the park.

The development and identification of the city's digital priorities should focus on:

- Quality lifestyles and an attractive place to live and work
- Diversification of the local economy by providing opportunity for meaningful work in an environment that provides quality lifestyles.
- Digital channels and provision of services to residents and visitors with a focus on maritime visitation.
- The NGO sector, particularly in health and aging services to enhance the quality of life for residents and the attraction of new residents for that quality.

# Focus areas for the Municipality of Kiama

The focus for Kiama in developing and identifying a digital strategy should be on building on nation leading work in local government online engagement, the visitor economy and arts, tourism, culture and lifestyle sectors.

| Strategic Area | Strategic Focus & Regional Leadership |
|---|---|
| Leadership | Local Government online engagement, aged care, digital enterprise capacity building in SMEs. |
| Capacity Building | Focus on Retail, hospitality, arts and culture visitor facing businesses and diversified rural land use. |
| Lighthouse Projects | Comprehensive visitor experience online and a suite of apps, Centre of Excellence in Gerontology, rural industry research or demonstration facility. |
| ICT Sector | Attract a node of iAccelerate and other programs into a co-working space. |
| Telework | Home based businesses, co-working space with a focus on visitor economy, arts and culture based. |
| Mobility | Black spots and content for Wi-Fi networks as part of a comprehensive visitor experience. |
| Open Data | Focus on data sets that will enhance the visitor experience. |
| Online Services | Online consultation platforms that build on the DLGP project outcomes. |

With strong civic leadership Kiama has already been successful in demonstrating its digital credentials with early take-up of the NBN and a number of applications and programs that the community can now build on.

Kiama visitors and residents can download a walking tour of Kiama app for both iPhone and Android devices. The walking tour is a colourful and engaging app incorporating oral history and historical images made available by the community and Kiama Library. This app is a strong foundation to build on with a focus on culture, arts, history and food experiences in and around Kiama.

Kiama's early and enthusiastic take-up and roll out of Australian Government initiatives such as the Digital Local Government Program and the Digital Enterprise Program have positioned the municipality at the front of the pack when compared to jurisdictions of similar size around Australia.

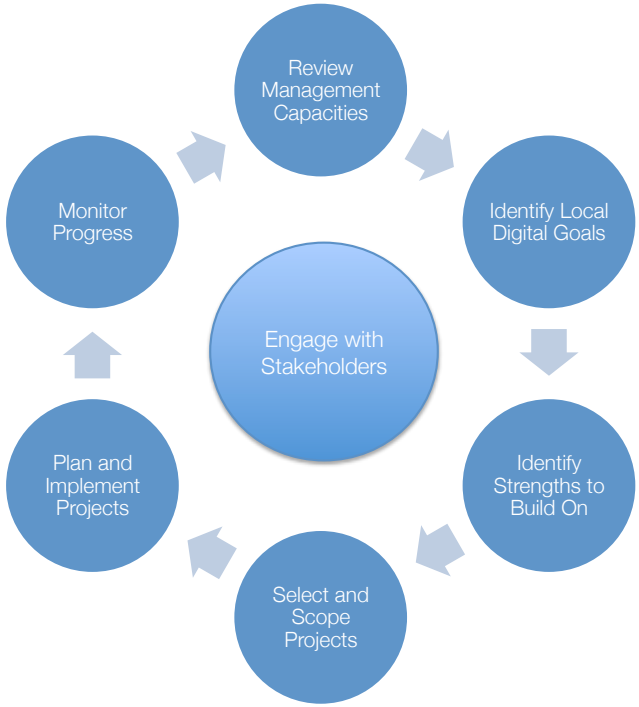
It is important that Kiama now builds on these initiatives and integrates its digital future with its economic future with a focus on:

- Developing a state of the art Gerontology centre utilising the latest digital technologies
- Developing a full suite of apps that enhance culture, arts, and the visitor economy.
- Developing a co-working space and support for home based digital business
- Promoting existing digital champions and capacity building in visitor facing businesses
- Promoting and building on the online community consultation platforms enabled by the Digital Local Government Program
- Promoting the Tourism & Hospitality digital toolkits available for SME sector.

# Localising the #IllawarraDigital Regional Strategy

While acting with the regional goals and strategies of this plan in mind each of the three Councils will need to understand their own local digital strategy that aligns with the regional digital strategy. A local plan will provide an LGA with a clear set of goals and an achievable set of actions for promoting economic, social and environmental development, enabled by digital technology.

#IllawarraDigital provides advice about developing a local digital strategy and proposes priorities for each Council working within the regional framework. A staged approach to this work is outlined as follows:




## Review management capacities

The LGA should ensure that it has the appropriate internal management capacities to establish, manage and review a local digital strategy. The key elements include:

Digital leadership: LGAs should designate a senior manager who can lead and manage a local digital strategy, to achieve the expected economic, social and environmental benefits. An effective digital leader should have:

- Strategic thinking and policy skills
- Strong communication skills and an ability to influence senior managers and community leaders
- A high level understanding of digital technology trends
- A good understanding of the economic, social and environmental opportunities of digital technology
- Program and project management skills.

Some organisations are now appointing “Chief Digital Officers” with a responsibility to lead transformation programs that exploit the opportunities of digital technology.

High-level commitment: LGAs need to ensure that there is high level commitment and support for their digital strategy. The strategy should be endorsed by the council, actively driven by senior management, resourced through budgets and linked to other LGA strategies, programs and activities.

Governance: LGAs need clear governance arrangements to control the planning, implementation and updating of their local digital strategy. The governance arrangements for the digital strategy should be integrated with the LGA's overall governance arrangements. The key elements of good governance for a Local Digital Strategy are:

Clarity about strategy: There must be clarity about what is being governed. The LGA's digital strategy should be clear, understandable and documented. The strategy should describe what is to be achieved (in terms of economic, social and environmental benefits) and what the measures of success will be. Importantly, it should describe the how, when and who of implementation.

Accountability: There should be clear management accountability for the strategy with a single senior executive being responsible for its overall management. This person is generally different from the overall leader of the strategy and is frequently their immediate supervisor.

Decision making structures: There should be clear processes for making decisions about the strategy. Digital strategies impinge on the responsibilities of different organisational groups and managers within LGAs and this means that the decision-making processes need to involve a number of senior managers. A digital strategy management committee would be appropriate for most LGAs. In some cases, there will be existing committees that can serve this purpose. The committee should be chaired by the senior executive who is responsible for the overall management of the strategy. It should include other relevant managers and the strategy leader. In general, relevant community leaders and other stakeholders would not be members of the digital strategy management committee but may be members of other consultative groups.

Information for monitoring: The digital strategy management committee should receive regular reports of the information they require to monitor and refine the implementation of the strategy. This should include information about progress, activities, schedules, resources, stakeholders, issues, risks and achievements.

Management of issues and risks: The digital strategy management committee should have processes for monitoring and managing issues and risks that can affect the strategy.

Partnership development: LGAs need the capacity to develop partnerships with other organisations for funding and implementing their digital strategy. For some projects under the strategy, the LGA will seek funding partners and implementation partners to share in the development of various resources. These may include departments and agencies of the NSW Government. There may also be partnerships with local organisations including community organisations, business organisations and education institutions. The RDA Illawarra will be a key partner organisation.

Project planning and management: LGAs need the capacity to convert strategies into effective actions. This requires effective project planning and management.

Financial and human resources: LGAs need the budget capacity to allocate the necessary financial and human resources to their digital strategy and the projects that they choose to undertake in support of their strategy.

Monitoring and review: LGAs need the capacity to monitor, review and adapt their digital strategy and its associated projects.

Service transformation: LGAs need the management capacity to develop and extend their online services in ways that meet the needs of their many client groups and in ways that enable efficiencies.

Internal digital systems and infrastructure: LGAs need strong, responsive and adaptable capacities to manage and implement the digital technology systems and infrastructure that they use for providing online services, supporting community infrastructure and providing internal administrative services.

Identify local digital goals: The LGA should identify local digital goals for the targeted economic, social and environmental development to be enabled by digital technologies.

Clarify community goals and local context: The local digital strategy should support the community goals for development and be compatible with the local context. LGAs should first consider their strategic and contextual factors including:

- Future aspirations, as set out in strategic community plans and similar documents
- Local strategies and priorities, including economic development strategies
- Community characteristics, including socio-economic characteristics
- Economic characteristics, including local industry profile and the importance of home-based businesses
- Environmental characteristics, including the extent of bush land and river frontage
- Cultural and heritage characteristics, including the current provision of arts events and festivals
- Infrastructure and development characteristics, including key investments and projects
- Legislative imperatives
- Budgets.

Clarity about the community goals and the local context is important for setting local digital goals. This clarity also helps to identify, scope and plan suitable projects for achieving those goals.

Consider regional digital goals: LGAs should then set priorities for their own local digital goals. The starting point could be the 7 regional digital goals:

## Identify strengths to build on

Each LGA should identify the local strengths on which to build a suitable set of projects for achieving the local digital goals.

The following table sets out some key questions that can be asked to help identify the relevant strengths:

| Potential Local Strength | Key Questions |
|---|---|
| LGA Management and Budget Capacity | • Does the LGA have the necessary capacities to plan and manage digital strategy projects?<br>• What budget capacity does the LGA have to fund projects under the digital strategy? |
| Partnerships and Funding Opportunities | • What is the potential for partnering with other local government organisations in the Illawarra and beyond?<br>• What is the potential for partnering with, and securing funding from, NSW Government departments and agencies?<br>• What is the potential for partnering with, and securing funding from, Australian Government departments and agencies?<br>• What is the potential for partnering with other organisations, including some beyond NSW? |
| Stakeholder Support | • Are there any pressing community issues, identified through local planning processes and community consultations, that will have a bearing on what projects are undertaken and how they are implemented?<br>• Do the representatives of key local community and business organisations understand and support the need for a local digital strategy? What are their priorities? |
| Broadband Infrastructure | • What are the local roll-out plans for the NBN?<br>• Are there developments or projects underway to extend Wi-Fi services? |
| Community Facilities | • How many libraries and other community facilities are available to support digital literacy programs?<br>• What digital literacy programs are already underway? |
| Community Organisations and Champions | • How many local community organisations are well placed to support digital literacy and similar programs?<br>• Are there local community leaders who could be digital champions? |
| Education Institutions | • Are there suitable local schools and other education institutions that could support the delivery of digital literacy programs?<br>• Are there suitable local schools and other education institutions that could provide training venues and facilities for digital literacy programs? |
| Local Culture, Heritage and Natural Assets | • Does the area have a rich array of local culture, history and heritage that could be promoted through digital channels?<br>• Are there arts activities, cultural events and festivals that could be promoted through digital channels?<br>• Are there natural assets and outdoor recreation opportunities that could be promoted through digital channels? |
| Local Industry Base | • Do local businesses have good access to advisory services and technical support services for digital technologies?<br>• How well placed are local business organisations and business networks to help small businesses to utilise digital technology? |

| | |
|---|---|
| | • Are there suitable local online business directories?<br>• What are the local opportunities for business incubation support services? |
| Local Projects and Developments | • Are there any privately funded or publicly funded projects or developments that offer special opportunities for using or promoting digital technologies? |
| Information Assets | • Does the LGA have paper based information assets that could be digitised and made available to the benefit of local businesses or residents? |
| Technology Platforms | • Does the LGA currently have a suitable suite of technology systems, infrastructure and mobile devices to support the development of online services, community infrastructure and administrative services? |

## Select and scope projects

The LGA should select and scope an appropriate set of projects that help achieve the local digital goals and build on the identified strengths.

Review proposed projects #IllawarraDigital proposes a series of projects/actions under the 8 individual strategies: these are listed on the previous pages. The LGA should review each proposed project and consider the following selection questions:

- Does the project address an important local priority and local digital goal?
- Is the project likely to be successful in helping achieving the relevant local digital goals?
- Does the project respond to the identified local strengths?
- Does the LGA have the management capacity to successfully plan and implement the project?
- Is it likely that the LGA will have access to the necessary financial, human and other resources to implement the project?
- Will the LGA be able to manage the risks associated with the project?
- Is the project likely to be good value for money?

Consider other projects: The LGA may also identify other suitable projects beyond those proposed in #IllawarraDigital. The same selection questions should be considered.

Select and scope

After the potential projects have been reviewed and the selection questions have been considered, the LGA should select and scope the projects that it intends to undertake.

## Engage with stakeholders

There should be effective engagement with stakeholders throughout the planning and implementation of the local digital strategy.

The following table provides an engagement framework for the different groups of stakeholders:

| Who | Why | How |
|---|---|---|
| Local residents | LGAs are democratically accountable for their strategies to local residents.<br><br>Local residents are the target beneficiaries of key projects. | Regular publication about the strategy and its progress through paper based channels including LGA newsletters and local media.<br><br>Regular publication about the strategy and its progress through LGA websites.<br><br>Interactive engagement with residents through social media and online consultation platforms.<br><br>Ad hoc feedback from residents through channels such as community organisations.<br><br>Occasional surveys of residents to measure progress. |
| Local businesses | Local businesses are the target beneficiaries of key projects. | Regular publication about the strategy and its progress through paper based channels including LGA newsletters and business publications.<br><br>Regular publication about the strategy and its progress through LGA websites.<br><br>Interactive engagement with residents through social media and online consultation platforms. Also, the use of the industry sector digital networks proposed in #IllawarraDigital.<br><br>Ad hoc feedback from meetings with individual businesses.<br><br>Feedback from business organisations. Establishment and updating of databases about local businesses. |
| Elected council members | Elected members must understand, endorse and agree to budgets for the strategy. | Briefings and presentations. |
| LGA managers | The strategy impinges on the responsibilities of different organisational groups and managers. | Briefings and presentations.<br><br>Involvement of relevant managers in planning of projects/actions.<br><br>Membership of relevant managers on a digital strategy management committee. |
| LGA staff | The strategy impinges on the responsibilities and duties of various LGA staff.<br><br>Some projects/actions may involve changes to work practices. | Regular publication about the strategy and its progress through internal newsletters and websites.<br><br>Use of social media to engage staff in aspects of planning.<br><br>Participation of relevant staff in planning and implementing specific projects/actions. |

| | | |
|---|---|---|
| Other LGAs | The Local Digital Strategy is closely aligned to #IllawarraDigital.<br><br>Some elements of #IllawarraDigital and Local Digital Strategy involve joint work by LGAs on online services and technology systems. | Participation in relevant collaborative bodies including the proposed regional management committee and regional online services working group.<br><br>Regular exchange of ad hoc information about progress, learnings and information resources. |
| Funding partners | Potential funding partners need to understand the benefits of projects/actions.<br><br>Committed funding partners need regular progress reports. | Preparation of effective business cases and progress reports.<br><br>Regular contacts with key decision makers. |
| Other partners | Other partners may have on-going involvement in the delivery of projects/actions. | Appropriate participation of other partners in planning and implementing specific projects/actions. |
| Telco providers | Telco providers have significant control over the roll-out of broadband services. | On-going liaison and meetings with relevant telecommunications providers. |
| Community organisations | Community organisations have good understandings of the needs of their communities.<br><br>Community organisations can influence community attitudes to the Local Digital Strategy.<br><br>Community organisations may have on-going involvement in the delivery of projects/actions. | Presentations to relevant organisations.<br><br>On-going liaison and meetings.<br><br>Engagement with organisations through proposed digital champions.<br><br>Appropriate participation of relevant organisations in planning and implementing specific projects/actions. |
| Business organisations | Business organisations have good understandings of the needs of their communities.<br><br>Business organisations can influence community attitudes to the Local Digital Strategy.<br><br>Business organisations may have on-going involvement in the delivery of projects/actions. | Presentations to relevant organisations.<br><br>On-going liaison and meetings.<br><br>Engagement with organisations through proposed digital champions.<br><br>Appropriate participation of relevant organisations in planning and implementing specific projects/actions. |
| Education institutions | Some local schools and education institutions may have on-going involvement in the delivery of projects/actions. | Liaison and meetings with various schools and education institutions.<br><br>Appropriate participation of relevant institutions in planning and implementing specific projects/actions. |

## Plan and implement projects

After projects have been scoped and relevant stakeholders have been engaged, the detailed planning and implementation of projects should be undertaken.

Project planning: Project planning involves working with relevant project participants and partners to define:

- Project objectives
- Method of implementation
- Resources, including financial and human resources
- Responsibilities and accountabilities
- Activities and timeframes
- Project management and monitoring arrangements.

Project implementation: Project implementation is about undertaking the planned activities with the allocated resources. It is also about:

- Deploying resources
- Communicating with participants and stakeholders
- Monitoring progress
- Monitoring risks
- Responding to unexpected events, issues and changed circumstances
- Adjusting plans, schedules and budgets where required
- Reporting in accordance with accountability arrangements.

## Monitor progress: Each LGA should monitor progress and revise the strategy when required.

A set of local measures should be developed to track progress. The following table sets out some possible measures, grouped according to the digital goals in the regional digital strategy:

# Best practice guide for councils when dealing with NBNCo.

To assist in creating a platform for the delivery of high speed broadband to families and businesses throughout Australia, NBN Co is seeking assistance from local governments to expedite the rollout whilst protecting amenities.

The Australian Local Government Association (ALGA) has produced a guide to provide councils with key engagement insights from several of the first release NBN Co trial site councils as to how they prepared and managed their interaction with NBN Co.

While recognising that there is no one-size-fits-all approach for councils, this guide lists several approaches that councils can undertake when dealing with the NBN rollout. The approaches have been sourced from a mix of small and large councils providing useful views.

Clearly, there are two key areas for consideration for councils yet to engage with NBN Co:

# Preparation**:** Be prepared for the project before it arrives in your area as the initial project learning curve, NBN Co's data requirements and council resource commitments are high; and

# Communication**:** Communicate to all stakeholders in your community about how council will manage the project from the initial planning stage right through to implementation and completion of the project.

Finally, although councils deal with infrastructure developments on a daily basis, it is important that the scale of the NBN rollout is put into perspective.

The rollout is National and aims to supply fibre broadband connections to 93% of Australian premises, with the remaining 7% served by a mix of wireless mobile and satellite technologies. In total, NBN Co will cover 13 million premises by 2021 and involve the installation of 181,000 km of optical network cable and 57,000 km of transit fibre.

For councils this implies that NBN Co will:

# Require a regional site for a Fibre Access Node.

# Provide a Fibre Distribution Hub for every 200 premises.

# Connect a Network Termination device to each premise.

# Require rights of way and access for the provision of backhaul transmission services to and throughout the area.

# Determine the optimal mix of underground vs overhead cable throughout the municipality.

# Carefully traverse heritage & environmentally significant regions and manage local planning codes.

For more information on the technical aspects and implications we recommend you read NBN Co's Information pack available at www.nbnco.com.au.

The full guide for councils is available through the Australian Local Government Association at:

http://alga.asn.au/site/misc/alga/downloads/publications/NBN_Co_ALGA_Ovum_Report.pdf

## Links to other useful resources

| Topic | Resources | Web Links |
|---|---|---|
| Local Digital Strategies | New York City Digital Roadmap<br>The city's digital strategy. | www.nyc.gov/html/digital/html/roadmap/roadmap.shtml |
| | Kiama's Digital Portal | kiamaconnect.com.au |
| | Wellington Digital Strategy<br>Web pages about the digital strategy of the New Zealand city. | wellington.govt.nz/your-council/plans-policies-and-bylaws/plans-policies/a-z-index/digital-strategy-and-action-plan |
| | Moreland City Council Digital Strategy<br>The digital strategy of the city in Greater Melbourne, which was one of the first NBN rollout areas in Australia. | www.moreland.vic.gov.au/mccwr/publications/policies-strategies-plans/digital%20moreland%20strategy%202012%20-%20council%20resolved.pdf |
| Digital Literacy | Overview of Digital Literacy<br>Wikipedia entry that provides a high level summary of digital literacy issues. | en.wikipedia.org/wiki/Digital_literacy |
| | Public Libraries and Digital Literacy<br>An article about libraries and digital literacy from the magazine of the American Library Association. | americanlibrariesmagazine.org/features/11272012/new-americans-and-digital-literacy-gap |
| | UK Online Centres<br>Website of the UK program for improving digital literacy in the | www.ukonlinecentres.com/about-us.html |

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| | community. | |
| Business and Employment | Short Fuse, Big Bang<br><br>Web resources from Deloitte Australia about their report on digital disruption for Australian businesses. | www.deloitte.com/au/digitaldisruption |
| | MYOB Tele-working Survey<br><br>Summary of survey about tele-working in Australian small businesses, commissioned by accounting firm MYOB. | myob.com.au/myob/news-1258090872838?articleId=1257830837509&year=2013 |
| | Brisbane City Digital Audit<br><br>Ernst & Young, in partnership with the University of Queensland, surveyed 500 Brisbane based businesses about their transition to a digital economy and prepared 25 case studies. | www.brisbanemarketing.com.au/Business/Digital-Brisbane/pages/Brisbane-Digital-Audit.aspx |
| | The Digital Business website<br><br>An Australian Government resource that provides practical guidance for small businesses and community organisations to establish and enhance their online presence. | www.digitalbusiness.gov.au |
| | ForwardIT for Small business<br><br>A website developed by the South Australian Government with practical advice for businesses going online. | www.forwardit.sa.gov.au/home/home_business |
| Online Government Services and Data | US Online Government Guidelines<br><br>Although a web resource for US Federal Government agencies, these guidelines provide useful advice for other governments. | www.howto.gov/customer-experience/improve-digital-services |
| | Victorian eGovernment Resource Centre<br><br>A comprehensive resource providing knowledge from many global sources about government use of digital technology and online services. | www.egov.vic.gov.au |
| | Case for Open Data<br><br>Guidance on business cases for open data from the website of the UK Open Data Institute. | www.theodi.org/guide/how-make-business-case-open-data |
| | Australian Open Government Data<br><br>The national website providing access to open data from the Australian, | data.gov.au |

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| | state and territory governments. | |
| Australian Government Programs | Digital Enterprise program<br><br>Details of the Australian Government initiative to help small-to-medium enterprises and not-for-profit organisations (including local cultural organisations) maximise the online opportunities enabled by the National Broadband Network. | www.dbcde.gov.au/digital_economy/programs_and_initiatives/digital_enterprise_program |
| | Digital Hubs program<br><br>Details of the Australian Government initiative to help local communities gain the skills needed to maximise the benefits provided by the National Broadband Network. | www.dbcde.gov.au/digital_economy/programs_and_initiatives/digital_hubs_program |
| | Industry Innovation Precincts<br><br>Details of the Australian Government initiative to "help businesses and researchers collaborate, share knowledge, deploy technology, create products and services and take advantage of business opportunities". Includes funding application details. | www.aussiejobs.innovation.gov.au/programs/Industry-Innovation-Precincts/Pages/default.aspx |
| | NBN Co<br><br>Website of the Australian Government owned company that is rolling out the National Broadband Network. Includes roll out schedules. | www.nbnco.com.au |

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