The Digital Economy: Opening up the Conversation

Eastern Metropolitan Regional Council Submission

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Overview

The Eastern Metropolitan Regional Council (EMRC) boundary constitutes around one-third of Perth's metropolitan area, encompassing 2,100 square kilometres and has an estimated population of 361,310 people. The EMRC has six member Councils: the Town of Bassendean, City of Bayswater, City of Belmont, City of Kalamunda, Shire of Mundaring and City of Swan. As a regional body, the EMRC acts on behalf of its six member Councils and represents the interests of the region through effective advocacy, the provision of regional facilities and the delivery of quality services.

The EMRC works collaboratively with member Councils and regional stakeholders to stimulate economic development in Perth's Eastern Region and enable residents and businesses to capitalise on the opportunities offered through digital technology.

A forum was held with representatives from the member Councils to discuss the paper, *The Digital Economy: Opening up the Conversation,* the outcomes of which have been summarised in this submission.

The EMRC welcomes the revision of the Australian Government's National Digital Economy Strategy and the opportunity to help inform the development of a strategy that will be an enabler to creating change and attitudes to technology.

Responses to Questions

Question 1. How are advances in digital technology changing the way you work, your industry and your community?

Technological developments, changes in standards, societal shifts and the changing expectations of not only the community, but also of staff and other organisations, have made it more difficult for local governments to stay on top of change. Traditional methods of work have been disrupted and while this may have beneficial outcomes and streamline processes in the long term, it also has the potential to distract local government from focussing on core business. On top of standard tasks, local governments need to invest time and money into sourcing technology, adapting it to suit local needs, training staff in using the technology efficiently and ensuring that this is all done without compromising security. Additionally, many local governments are facing increasing pressure to cut budgets and work with fewer staff, so the increased pressure to adapt rapidly to change can be seen as an additional financial pressure.

Social media is changing how local governments are expected to interact with their communities but risk adversity means that many local governments are not engaging proactively. The ease of commenting online may have increased community feedback regarding local government activities but this is often not sufficient to count as consultation.

Not only is feedback and commentary from social media not necessarily representative of the entire community but responses are also typically emotional. Furthermore, it is not uncommon to find misleading and/or incorrect information on social media and the internet in general so issues arise when responses or queries are based upon this incorrect information or when opinion is misinterpreted as fact. Members of the community now have the expectation that they will be responded to online in a timely manner which is often not possible in local government. Online feedback also reduces human interactions and decreases the opportunities local government staff have to build relationships with the community.

Information being accessible anywhere and anytime has changed community expectations about how local governments do business and the immediacy of response. Local government staff are expected to be 'on call' or more readily available due to the ubiquity of smart phones and today's real-time communication. Respect for response times is shifting and being contactable all the time has the propensity to intrude on personal time, if not well managed. Health and wellbeing must be considered when flexible work hours, the ability to work at home and extended contact hours mean staff are always "on" and the work/home balance is blurred.

Advances in digital technology have delivered benefits in areas such as planning and consultation. The use of virtual reality technology to simulate proposed developments and immerse local government Councillors, officers and the community in the visual experience of the end product is a clever way of engaging through the use of technology.

Online portals and digital methods to send information have resulted in some time savings. It is increasingly commonplace for organisations to replace paper document submission processes with online portals, for example when submitting forms or applying for grants. This reduces processing time however reinforces the need to ensure secure, safe and legitimate online interactions. It must also be noted that online portals do not always increase efficiency as staff must be trained to use them effectively. The multitude of different online platforms and portals can make finding and accessing the correct information an overwhelming task.

Using updated remote monitoring and reporting technology for maintenance has also delivered positive results, for example the prosecution of a repeat offender under the *Graffiti Vandalism Act 2016* after provision of indisputable evidence supplied by remote monitoring. Local governments will continue to investigate the benefits from technology such as this.

Question 2. What is your vision for an Australia that thrives in a digital economy? Where would you like to see Australia in five, 10 and 20 years' time?

Our vision for the future is for the people and businesses of Perth's Eastern Region to confidently make use of digital technology to enable better living, prosperity, learning and social participation.

In more detail, this includes Perth's Eastern Region having:

- Good digital infrastructure - access to affordable, reliable, high-speed internet services
- Connected people - people with the confidence, capability and access to use digital technologies to support fulfilling, creative, healthy and socially connected lives
- Vibrant communities - the different localities and cultural communities of Perth's Eastern Region will actively use digital technologies to record, share, promote and

celebrate the distinctiveness, features, stories and heritage of their localities and cultures

- A thriving economy - Perth's Eastern Region thriving as existing and new businesses use digital technologies to grow their market shares, improve productivity, enhance their knowledge resources and build new networks of suppliers and partners
- Employment opportunities - a higher proportion of the residents of Perth's Eastern Region will work within the Region through growth in knowledge-based businesses and technology-enabled work practices such as tele-work
- Access to services - improved access to services, delivered efficiently using digital tools and online services
- Environmental sustainability - lifestyles and business activities in Perth's Eastern Region will be more sustainable and the understanding of the Region's natural assets and ecosystems will be higher, through the use of digital technologies, online information resources and smart infrastructure.

Question 3. What is the role of government in achieving that vision?

The Australian Government has a number of important roles to facilitate the vison for Perth's Eastern Region. These include:

- Accelerating the digital economy by working with the private sector to coordinate enabling infrastructure such as online identity, digital mail and payment systems;
- Accelerating government efforts to engage online, make agencies transparent and provide expanded access to useful public sector data;
- Reducing the cost of government ICT by eliminating duplication and fragmentation; and
- Creating a better model for achieving whole-of-government ICT goals that acknowledge the decentralised Australian Public Service and differences in scale and capabilities across agencies.

In particular, the government needs to provide quality, affordable and reliable internet access consistently across Perth's Eastern Region to achieve the vision as the variation in internet connection across Perth's Eastern Region and localities currently without sufficient access is an impediment to growth.

The Australian Government can also continue to develop security and privacy protocols and services which may help to reduce the risks associated with some digital technologies such as using the Cloud to store data. Reduced risk and increased protection of privacy would facilitate further changes in regards to how ratepayer data is collected, stored and analysed.

Further development of government processes and streamlining interactions will also make it simpler, clearer and faster to do business with the Australian Government. This will help Perth's Eastern Region achieve its vision by leading by example which may prove the worth of adopting digital technology and encouraging other businesses to follow.

Question 4. What key disruptive technologies or business models do you see? What do you predict is on the horizon in five, 10, 20 years' time?

Planning in local government will be disrupted as routine processes to check standard information become automated which will free up expert staff time to deal with more complex problems outside standard parameters. Further local government planning changes include

immersive experiences in 3D models for visually depicting actual/real scale, layout, design and interactions with the surrounding environment, both built and natural.

It is also predicted that there will be more responsive platforms for digital democracy to engage with local communities and better utilisation of council assets and space using shared platforms. Further automation of back room office functions within local government (for example in routine tasks related to finance, payroll, rating and timesheets) will become more commonplace over the next five years and there are likely to be opportunities to facilitate greater innovation in contract and procurement processes.

In terms of smart and connected communities, the next five years will likely see a proliferation of sensors and technologies for parking management as well as controlled lighting, energy management, CCTV, smart bins, greater utilisation of free Wi-Fi and greater optimisation of real time traffic management.

As well as digital democracy platforms and "smart city" sensors, there are a number of advances enabled by digital technology which will shape the way Australians live, play, travel, communicate, bank, work, conduct business, interact with their natural and built environment and connect socially within the next 20 years. This includes driverless and electric vehicles, renewable energy technologies, mesh technology, digital twins, robotics, automation, machine learning, drones, immersive experiences (through augmented and virtual reality) distributed ledgers and blockchain. Many of these technologies are already present and progressing on the Gartner Hype Cycle for Emerging Technologies and will be in the "Plateau of Productivity" in 20 years.

Home offices may become more common, while shared spaces and the sharing economy commonplace. Joint ventures may also become increasingly common. There may be a higher demand for people with science, technology, engineering and mathematics knowledge, with these sectors already seeing an increase in job numbers and wages. There may also be a further increase in people working as independents or freelancers, enabled by digital changes. Many jobs will be different; mundane, repetitive or routine tasks may become partially or fully automated with people focussing on those activities that require human adaptability or emotional intelligence.

With the rapid change in technology seen over the last several decades and the disruptive technologies presently emerging, it is hard to predict exactly what Australia will look like in 20 years. However, it is expected that there will be significant and impressive digital advancement with numerous flow on effects, positively changing the way Australians live.

Question 5. What communication services, and underlying data, platforms and protocols, does Australia need to maximise the opportunities of the digital economy?

In the realm of local government, there needs to be greater utilisation of current datasets that are readily available to local governments. Local government staff are often not aware of potentially beneficial datasets, don't know how to access them, or don't have the resources or understanding to take advantage of them. Further education regarding the variety, accessibility and applications of government datasets would be beneficial so that local government and businesses can take advantage of new opportunities. Building awareness of the value of local government data through information audits and the hosting of regional hackathons on open datasets will reduce the 'risk' perception by allowing risk taking to occur in a controlled and comfortable environment before launching into data sharing across platforms. Local governments may benefit from increased data sharing but are cautious.

Well-developed security and privacy protocols may help to reduce the risks associated with "opening up the data".

NBN connectivity continues to be an issue in Perth's Eastern Region, with parts of the region not connected and parts experiencing 'black spots' where there is no connectivity of any service. A large proportion the region is unlikely to be connected to the NBN in the near future and this puts doubt into the minds of many that the Australian Government will be able to achieve the goal set of *"8 million homes and businesses connected to the NBN by 2020"* (*The Digital Economy: Opening Up the Conservation*, page 13 and 15). Certainly, in Perth's Eastern Region, the issues and delays residents and businesses are experiencing has resulted in disappointment and reservations as to whether the NBN will be installed successfully to allow them to capitalise on the resulting opportunities before they fall too far behind. The follow-on effect from inconsistent and unreliable broadband connections is the delay in the adoption of digital technologies and it is reported that the lack of access to reliable internet services in some localities within Perth's Eastern Region is an impediment to attracting and retaining businesses. Given the issues surrounding connectivity, there is also scepticism as to whether it remains likely that the use of digital technologies will benefit the economy in the scale and timely fashion proposed by the Australian Government; *"Adoption and use of digital technologies could contribute $140B - $250B to Australia's GDP by 2025"* (*The Digital Economy: Opening Up the Conservation*, page 10).

Additional issues regarding the NBN are that the potential speed and therefore potential benefits are being restricted in many locations by the roll out of fibre to the node as opposed to fibre to the premises, the reliance on existing 'copper' infrastructure in other locations, and the price structure. This needs to be addressed for all Australians in order to maximise the opportunities of the digital economy.

Furthermore, while 4G may cover 98% of the Australian population, many areas are still only covered by one service provider therefore limiting residents, businesses and visitors to one choice and one price structure. Enabling increased coverage and delivery by other service providers will increase competitiveness and potentially provide more affordable options and choices for customers.

Local governments are aware of the need to create and embrace flexible protocols and standards for the Internet of Things (IoT) which will assist in underpinning the digital economy. Platforms which enable connectivity and data sharing across a variety of services will be needed to maximise efficiency. Security protocols will also be required to ensure that all digital infrastructure is protected and that private data is secure. 5G is needed to ensure that there is the capacity for the increased data requirements.

Question 6. What opportunities do we have to accelerate the development of technologies that will underpin Australia's digital economy?

Creating greater partnerships between local governments and technology companies developing and deploying technology will accelerate the adoption of digital solutions. Piloting projects through partnerships will also prove the viability of such ventures so that they may be expanded to take advantage of economies of scale. National standards for technology and digital infrastructure would mean that when technologies are rolled out across large scales they are interoperable and compatible so that conversion or multiple user interfaces are not needed.

A regional investment approach to the sharing of technology would be beneficial to accelerate development and increase uptake of digital technologies. Sharing virtual reality and augmented reality technology assets and technology would allow local government to view proposed developments and to streamline processes, make informed decisions and effectively communicate the vision of these projects to gain support.

Additionally, local government are not fully prepared for the increasing number of shared economy ventures, some of which are likely to become commonplace in the future (for example, share autonomous vehicles). All levels of government need to adapt and put in place realistic and consistent planning and risk mitigation protocols to facilitate the vision for the future.

There is also an opportunity to accelerate the development of technologies through greater education and advocacy. This awareness raising needs to happen in a bottom-up approach so that decision makers can keep pace with, and be more aware of, the rapid changes in technology and community expectations. Awareness and understanding of these issues may also contribute to resolving conflict regarding technology and community expectations which occurs in government legislation at all levels.

Question 7. What opportunities do we have in standards development and regulation to:
— enable digital entrepreneurship, innovation and trade?
—mitigate the risks associated with digital disruption?

No comment.

Question 8. What digital standards do we need to enable Australian businesses to participate in global supply chains and maximise the opportunities of the digital economy?

No comment.

Question 9. What opportunities do we have to build trust and community confidence through resilience to cyber threats, online safety and privacy?

No comment.

Question 10. What roles should government, business and individuals play in protecting the community in a digital economy?

There is a need to protect private data while enabling more efficient interactions with all levels of government. The role of local government in protecting the community is to ensure that each organisation has adequately addressed security issues with regard to holding and sharing of personal data. Breaches of security come in many forms and government will need to set minimum standards and protocols for security, as well as becoming increasingly more responsive to the changing security landscape.

Question 11. What integrity and privacy measures do we need to ensure consumers can protect their data?

No comment.

Question 12. What are the barriers for business, particularly small business, in adopting cyber security and privacy practices?

Uncertainty about the security of technologies that could endanger ratepayer or government privacy (such as the Cloud) impede the uptake of such technologies and therefore implementing cyber security and privacy measures is extremely important to facilitate the digital economy. There is some uncertainty about how to prove online security and a lack of understanding by local government staff, Councillors and community members about how to ensure safe online interactions. Greater education about online security, particularly by a top-down approach, would inform those who are hesitant to adopt technologies perceived as risky to evaluate risk accurately.

Question 13. What integrity measures do the Australian Government and the private sector need to take to ensure business–consumer transactions are secure?

The Australian Government needs to ensure that it is building capacity across its own government departments as well as the private sector in understanding the opportunities and risks of the digital economy; accessing international expertise to ensure robust and current best practice integrity measures; developing protocols for transactions and interactions; and becoming more agile and responsive.

Question 14. What is holding Australian businesses back in terms of benefiting from digital technologies?

Local governments consider implementing innovative new ideas as high risk because new ideas are often expensive and must often be piloted on a small scale. As local governments operate with municipal funds, they need to be transparent and accountable regarding financial decisions to justify decisions to ratepayers and councillors. There is not yet a good understanding of digital technologies, so investment has been sporadic across the sector.

Often local governments find that services do not suit their requirements, for example room booking platforms where community members can hire a meeting room or town hall are not capable of incorporating variable pricing structures. Greater flexibility in software and programming to suit local government requirements would be beneficial and would facilitate the uptake of beneficial technology and create a market for competition and development.

The risk averse nature of local government also means many are hesitant to use social media even though there are potential benefits. A more secure environment and thorough risk mitigation strategies would reduce these barriers and potentially allow local government to benefit from the full potential of social media.

Information Technology (IT) departments in local government are often challenged by the security issues presented by the idea of hosting of services and information on the external cloud and the use of cloud based technologies. There is a lack of confidence that the cloud is, and will remain, secure. Additional effort to increase security of cloud based technology

and other digital infrastructure, as well as increased education regarding the safety of storing information online, would be beneficial to accelerate adoption of technologies such as these.

Another common security issue is the use of personal phones and laptops for work purposes. While there are security concerns, using personal devices for work may be unavoidable or beneficial due to increased flexibility, convenience and efficiency and therefore appropriate measures should be taken to ensure it is safe.

Question 15. What would help Australian businesses to embrace digital technologies?

Developing a national framework for capacity building in local governments will enable faster adoption of technological change. Encouraging greater interactions between local governments and developers of digital technology solutions will address sector requirements are met.

Ensuring that privacy and security risks are addressed at the federal level will build confidence in the local government and private sectors.

Ensuring adequate access to NBN and 4G/5G technologies across all sectors will enable the digital economy to grow.

Question 16. What efforts are you or your organisation making to respond to digital transformation? Why?

The EMRC's *Regional Digital Strategy for Perth's Eastern Region* was developed in 2013 in collaboration with its member Councils. The strategy complements the Australian Government's *National Digital Economy Strategy* and the Western Australian Government's *Digital Framework* and responds to the strengths, challenges and aspirations for the development of the region. A number of initiatives have been implemented from the strategy, including Regional Digital Art Awards, a Digital Forum, Digital Report Card and Directory of Digital Services in 2016, use of digital technology such as the Marri App, and QR codes in 2015, and Adopting Digital launch in 2014 including digital exemplar videos.

The EMRC recently hosted a facilitated forum to discuss The Digital Economy; Opening up the Conservation discussion paper. There are also initial plans to host a series of seminars exploring some of the emerging technologies and their potential applications in local government, such as big data, Blockchain, machine learning, data analytics, digital democracy and the Internet of Things. The EMRC member Councils are also running information seminars on similar topics. These seminars aim to inform and empower staff within local government, councillors and businesses to seek digital solutions.

The City of Kalamunda is releasing a Digital Strategy in late 2017 to support the City's digital transformation.

The City of Swan is committed to implementing digital initiatives to maximise future opportunities and improve internet connectivity for local business, visitors and residents. The City has implemented the 'Making Midland Connect' free WiFi initiative which is recognised as one of the pioneering wireless technology initiatives in WA. The City is one of 70 Australian communities in the Federal Government's Digital Enterprise Program, designed to help communities maximise digital opportunities enabled by the national broadband network.

City of Swan libraries aim to help future-proof members of the community through the Futures Lab program which consists of workshops, classes and makerspaces.

Question 17. What opportunities do we have to use digital technologies to improve linkages into export markets and global supply chains?

No comment.

Question 18. What opportunities do small and medium-sized businesses have to embrace digital innovation to drive customer value, improve their services and unlock their potential?

Small businesses may be less competitive if they cannot afford certain technologies, for example, virtual reality to visually present proposed building developments. If large businesses can afford these digital technologies they may hold the competitive advantage and outcompete proposals from those who cannot. Smaller businesses may be disadvantaged as they cannot yet afford to invest significant funds in cutting edge technology. Investment in digital technologies that will increase competitiveness would help small to medium businesses take advantage of the opportunities offered by digital technology.

Small and medium-sized businesses may be more agile in the use of general digital technologies such as smartphones and apps. By finding and adapting existing technologies, platforms and software, businesses may be able to improve services with little additional investment.

Question 19. What are the key new growth industries that Australia should be tapping into? In what technologies and sectors should Australian businesses take the lead, and where should we be a 'fast follower' of international trends?

No comment.

Question 20. What opportunities do we have to equip Australians with the skills they need for the digital economy, today's jobs, and jobs of the future?

There is an opportunity for the Australian Government to use the momentum from the Future Ready program under Smart Cities to develop and fund a national framework for capacity building across industry sectors so that they can be part of the rapid technological change.

The Australian Government is also in a position to influence the education sector to ensure that providers are developing and delivering the courses needed to equip Australians with skills for the jobs of the future.

Question 21. What opportunities do we have to bridge the 'digital divide' and make the most of the benefits that digital technologies present for social inclusion?

As the level of government closest to community, it is imperative that local government builds its capacity and engages with the whole of its communities to ensure social inclusion

is incorporated at the forefront of changing services. Opportunities are not yet clearly understood, so building capacity is the first step to accessing the benefits of digital technologies.

Question 22. What opportunities do we have to ensure digital technology has a positive impact on the cultural practices and social relationships of Australians?

As above, local government is the level of government closest to community and is using digital technology to improve consultation, engagement and awareness. By demonstrating and modelling cultural and social inclusivity across its interactions with community, local government can show leadership and foster a culture of inclusion.

General comments

In local government circles advocacy needs to be a priority to ensure everyone is on the same page. Often a knowledge divide exists whereby some executive staff and Councillors are not aware of the digital, technological and innovative work council officers are doing and therefore are not aware of the importance of creating an environment which encourages these kinds of activities.

Conclusion

The EMRC welcomes the review of the Australian Government's National Digital Economy Strategy and commends the Australian Government for starting this conversation with all Australians to identify the issues, challenges and opportunities in the context of the broader digital economy. Enabling, supporting, building and/or empowering, whether through infrastructure standards and regulations or through driving digital capability and productivity, will benefit the EMRC and its member Councils and communities and all levels of government.

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