Responses to the Digital Economy Future Directions Consultation Paper

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Issues

The premise on which the consultation is developed is fundamentally flawed. It assumes that the "Digital Economy" will somehow operate outside normal economic activity or will be a driver for additional economic activity.

The key impact of technological change since the industrial revolution has been to deliver

- Cheaper means of production (steam engine)
- Lower cost or faster delivery (railways, steamships and aeroplanes)
- Improved working and living conditions (electricity, urban transport systems)
- Improved mass communication (telephone, television, Internet)
- Expanded general wealth and expanded consumption

The first three required significant capital investment and the last two are still to reach their full potential for the greater population in emerging economies such as China and India.

Implementation of digital technologies tends to be easily duplicated and delivers greatest benefit when technology is integrated and accepted into general economic activity. In order to gain maximum benefit from ICT and the Internet, Australia must assimilate technology into the broad economic strategy for capitalising on areas where Australia has a natural competitive advantage.

This paper canvases issues from a very narrow bureaucratic perspective and with a lack of vision.

The government's role in this area is:

- to provide cheap and unrestricted access to essential infrastructure;
- to provide a legal and regulatory framework that acknowledges a borderless global market whilst also providing Australian participants with the same level of protection provided in physical markets; and
- to adopt an economic planning framework that identifies and supports integrated technology based infrastructures that underpin Australia's areas of inherent competitive advantage.

WHAT DOES SUCCESS LOOK LIKE

1. *What markers can govt, industry and other stakeholders establish*

Basic markers are:

- cheap and unrestricted access to essential infrastructure: and
- a legal and regulatory framework that acknowledges a borderless global market whilst also providing Australian participants with the same level of protection provided in physical markets

2. *How will we know when we have maximised the potential of Australia's participation in the digital economy*

In the same way that any country knows when it has maximised its economic position. One would hope that all stakeholders will continue to develop innovative ways of adopting and adapting existing and emerging technologies.

The digital elements of economic activity will continually evolve and it is unrealistic and highly limiting to try to define a quantifiable endpoint.

OPEN ACCESS TO PUBLIC SECTOR INFORMATION

1. *What categories of Public Sector Information (PSI) are most useful to industry and other stakeholders to enable innovation and promote the digital economy*

The key PSI is currently published economic performance data combined with data on the impact that adoption of digital technologies has on the profitability and efficiency of various sectors.

2. *What priority issues will facilitate the use of PSI*

Most large organisations have the analytical capacity and financial resources to effectively utilise PSI in guiding business strategies. However, SME's do not have the resources to make best use of PSI. Additional analytical information provided as part of the PSI would significantly improve the ability of SME's to act on PSI.

3. *If PSI is made open access, what are the best formats to enable and promote use and reuse.*

The most effective way of encouraging use and reuse of PSI is to provide it in digital format that is able to be downloaded with selective application of acquisition cost and in a format that attracts minimal transmission costs.

As stated in the previous paragraph, SME's are generally not in a position to buy PSI and should be offered relevant data at no cost. Conversely larger Australian organisations and international companies should be expected to pay for PSI that provides financial benefit to them.

The risk in this approach is that Australia's competitors would also have access to the material. However this risk would be significantly reduced by requiring the verification of data such as an ABN/ACN and TFN to verify entitlement to the PSI.

4. *If PSI is made open access, what licensing formats would best promote its use and re-use.*

As PSI has usually been funded by the Australian Taxpayer it should be made available to Australians without licensing restrictions but with the commercial restrictions outlined in the previous paragraph.

The distinction must be made to clearly differentiate between Public Sector Information and Public Sector Intellectual Property (PSIP), which would be patented in order to ensure the public sector institutions that have invested in developing the IP gain a return on that investment in order to fund further IP development. This approach also provides a mechanism for the IP owner (the Australian Government) to control who may gain access to the IP and ensure the Australian economy gains maximum benefit and leverage from deployment of the IP.

5. *Should licensing terms distinguish between commercial and non-commercial uses and reuses.*

PSI should be available for both commercial and non-commercial use on an equal no-cost basis. PSIP should continue to be subject to standard commercial practises of the developing agency.

6. *Are there other examples of innovative , online uses of PSI*

Not to my knowledge

7. *Is there any economic modelling or other evidence to show the benefit to Australia from open access to PSI*

Not to my knowledge

DIGITAL CONFIDENCE

1. *What more can industry and other stakeholders do to address concerns about consumer privacy and online safety*

Responsibility for consumer privacy and safety has to date rested almost exclusively with the consumer. Effectively this places the greatest responsibility for privacy and safety with the elements of the digital economy least able to deal with it.

One of the early lessons learnt by government and commercial organisations in their deployment of digital technology was that responsibility for security and protection of corporate information must be handled at a system level, not by individual employees. This approach provides more effective security and organisational confidence in the protection of valuable assets at a lower cost.

To date, the vast majority of Internet Service Providers (ISPs) have not offered their customers similar centrally managed services. Appropriate and affordable technology is available to provide this service but has not been seen as commercially attractive to date.

This issue is significant because all universally accepted technologies with positive economic impact have not required end users to be technology experts or to take responsibility for safe delivery of the functional benefits. For universal adoption these features must be integrated into the service delivery infrastructure.

2. *What more can be done to increase trust and confidence in online transactions*

Trust and confidence in online transactions is based on the perceived level of risk involved. If the potential benefit of the transaction is great and the perceived risk is small then the individual will complete the transaction. To date, there do not appear to have been any studies which address the sociological elements of this risk analysis.

Changing behaviour is best dealt with by identifying and addressing the human factors rather than providing technical solutions which are regarded with suspicion by the general population.

3. *What is needed to address the SME concerns outlined in this paper*

SME's have primarily identified that they have neither the expertise nor resources to implement current technology comfortably. Businesses and particularly SME's focus their expertise and resources on capabilities that deliver profitable revenue. SME's concerns would be best addressed by providing integrated business systems tailored to the functional requirements of their industry rather a series of technologies that they must integrate to deliver business benefits.

4. *Are there possible barriers preventing a strong online retail experience in Australia? What can industry and other stakeholders do to address this*

Despite the dreams of technologists, online shopping will remain a shopping option. The focus for online shopping for retailers remains to provide adequate data from which consumers can make purchasing decisions and to ensure that the payment and delivery service meet consumer requirements. These issues appear to be adequately addressed by current processes.

However, despite the availability of secure payment systems at the retail end of the transaction, vulnerability remains at the consumer end. This vulnerability is directly proportional to the consumer's ability to protect the environment from which they conduct the transaction.

Addressing this area of consumer concern by providing consumers with secure home based systems that do not require high levels of expertise to operate and maintain. Providing consumers with this type of safe access to online retail options would significantly address both perceived and actual consumer concerns on the risk of conducting transaction online.

5. *What is the experience of business-to-business e-commerce supply chains? What is the take up,, is it economic and are there barriers. What is the international experience*

I can only comment from personal experience within the ICT sector and from engaging with this sector's customers. The adoption of e-commerce between established partners is well developed, effective and efficient as there is a high degree of trust through adoption of common auditable processes.

6. *What evidence shows the possible barriers preventing greater online content offerings. What can be done to address these.*

Lack of effective international IP protection would appear to be the greatest barrier to greater on-line content offerings. Distribution of pirated music and video material provides the bulk of Internet peer to peer traffic which continues to grow exponentially. Stemming this illegal movement of material and thus providing a more profitable environment for legal distributors requires a global collaborative effort by governments, ISP's and the legal vendors.

The technology already exists to identify and thwart illegal peer to peer traffic but it is not supported by an effective legislative framework or co-operative ISP's and carriers. There is emerging evidence that many legal distributors of online content are keen to exploit the technology but are currently dissuaded because of the unsavoury reputation generated by current usage.

DEVELOPING AUSTRALIAS KNOWLEDGE AND SKILLS BASE

1. *What can industry and other stakeholders do to assist the Government's existing efforts to develop the digital and media literacy skills of Australians*

This issue should be viewed from two perspectives.

The first is to take a consumer perspective. Consumers should not need to be technology experts in order to use the technology. In fact widespread adoption will only occur if the reverse is true. Industry and stakeholders should be striving to ensure that consumer's access to the digital economy is through simply accessed services and supporting appliances.

People will adopt technologies if the personal benefit derived is substantially higher than the perceived effort to adopt the technology.

The second is to take the industry perspective. As an industry member who utilises Australia's skills and knowledge base, it is important for industry, academia and training institutions to work collaboratively and continuously to ensure education keeps pace with the rapid change in technological requirements. It is also essential for industry to provide their staff with ongoing learning and re-skilling opportunities as technology changes.

This will require greater flexibility and faster reaction from industry, educational organisation and government funding bodies than presently exists

2. *Would specific online measures to inform business and local industry groups about online offerings assist in developing e-business*

Business and industry groups that are comfortable with online information sources use these to great effect. The challenge for industry bodies is to encourage members without the same degree of comfort to engage with this information source. Simple and easy to access to "one stop" sites which avoid technical jargon are the most effective methods of disseminating information via digital media. For SME's it must also be available when they have the time to access it and be free of technical jargon.

3. *How can industry assist in promoting the attractiveness of ICT related degrees*

Pay graduates more money and offer them the opportunity to move jobs frequently. Industry must learn to engage with Generation Y on their own terms and utilise their quest for change to the benefit of both industry and the wider Australia. This will require the expansion or establishment of flexible mentoring programs that are supported and managed by all stakeholders.

4. *What core set of digital economy skills can be incorporated into non ICT-related degrees*

In order to gain the best functional outcomes for business systems it is essential that the required outputs are clearly identified and defined. One would hope that all tertiary study would incorporate imparting some requirements analysis, project definition and project management skills.

5. *Will industry work with Government through the Productivity Places Program and Innovation and Business Skills Australia to improve the curriculum of current training courses*

Industry groups such the Australian Industry Group (AiG) are actively engaged in working with government and academia to improve course content and delivery

6. *How can we better match supply and demand for skilled ICT workers*

Not my area of expertise

7. *What measures did industry find successful in boosting staff, ICT and e-business skills*

Not my area of expertise

ENSURING AUSTRALIA'S REGULATORY FRAMEWORK ENABLES THE DIGITAL ECONOMY

1. *Should the current safe harbour scheme for carriage service providers be broadened*

This issue is one of implementation rather than legislation. Whilst carriers and ISP's generate substantial revenue streams from the transmission of data which potentially infringes IP owner's rights they will resist efforts to curtail that traffic. Adoption of filtering mechanisms that clearly identify legitimate traffic would substantially reduce the need to rely on the safe harbour scheme to protect carriers and ISP's.

Encouraging adoption of the technologies that already exist to deliver this capability remains the challenge for government. Current legislation covers protection of IP owners rights and combining the filtering technology with adoption of regulations pointing to that legislation could resolve the issue.

2. *Does Australia's copyright law unreasonably inhibit the operation of basic and important internet services. If so, what are the nature of such problems and practical consequences. How should these be overcome*

The Internet is simply another avenue for economic activity and should be subject to the regulations that protect the rights of owners of intellectual property. The fact the much of the Internet operates anonymously and trans-nationally does not mean that IP owner's rights should be abrogated.

3. *is there non-copyright legislation that is directly relevant to digital economy businesses that create uncertainty or barriers*

The Telecommunications Act makes it difficult for carriers to store and log illegal material for subsequent investigation by law enforcement agencies.

DIGITAL ECONOMY AND THE ENVIRONMENT

1. *What steps, if any, should the government take to promote the greater adoption of teleworking and videoconferencing What impact do O H & S laws have on the uptake of these options*

Most large organisations are already adopting teleworking, videoconferencing and webinars to reduce interstate and international travel. Government intervention is not required to encourage uptake as economic factors already provide this incentive.

2. *Regulation for e-waste is already under consideration. What other steps can government and industry take?*

This issue is outside my area of expertise

MEASURING THE DIGITAL ECONOMY AND ITS IMPACTS

1. *What, if any, additional datasets should government collect to improve the benchmarking of Australia's digital economy*

The existing data sets provide useful information but as uptake increases these data sets need to become more granular in identifying specific usage patterns for particular sectors and sub-sectors.

2. *What are the key digital economy markers*

Key markers for the digital economy are improved profitability and productivity. ICT is an enabler, not an end in itself.

In the current economic climate, generation of additional economic activity outside Australia and the resultant increase in export income should also be key objectives and markers. Particular emphasis should be placed on ICT based IP which can generate significant multipliers in terms of income generated.

3. *What additional industry sources of data exist which provide background on digital economy metrics*

   This issue is outside my area of expertise

4. *What additional research and data work could industry or data collection organisations undertake to assist in measuring Australia's digital economy*

   This issue is outside my area of expertise

5. *Do you have views on the adequacy of the existing data sets or suggestions as to how they might be improved*

   This issue is outside my area of expertise

CONCLUSION

The challenge for government is to acknowledge that the digitally based elements of the economy are simply another aspect of economic activity and do not provide a magic bullet for economic growth. ICT continues to be predominantly an enabler for improved productivity and efficiency.

Because Australia has a relatively small population spread over a large geographic area it provides an ideal proving ground for innovative use of ICT.

Areas of particular benefit include:

- provision of sophisticated remote health service delivery which could rapidly be expanded to "in home" health service delivery for an aging population;
- expanded delivery of sophisticated education packages to remote communities which could translate to combined school and home based learning for general education which would increase utilisation of existing staff and facilities;
- Sophisticated energy monitoring and management systems for homes and smaller commercial buildings. Professor Jack Singh from La Trobe University has a pilot in place which utilises existing infrastructure to monitor energy usage and manage building systems/appliances to minimise energy use without negatively impacting building users; and
- Appliance based home and SME delivery devices which de-emphasise the computer based nature of the device and focus on the functional outcome it delivers.

The general population wants access to functional capabilities enabled by ICT based solutions without needing or wanting to know how they work.

By simple analogy most modern cars have highly sophisticated computer systems which manage engine performance, braking efficiency, traction control and if required airbag

deployment. 99% of drivers neither know nor care how those systems work, only that they work reliably when required.

That is the level of integration and unobtrusiveness that is required to maximise the economic benefits that ICT and the Internet can deliver for Australia.