Digital Economy Strategy Team
Department of Industry, Innovation and Science
GPO Box 2013
Canberra
ACT 2601
Australia

Submitted via: digitaleconomy@industry.gov.au

30 November 2017

Dear Sir/Madam,

Re: Asia Cloud Computing Association's (ACCA) Response to the Australian Government Department of Industry, Innovation and Science Digital Economy Consultation Paper

The Asia Cloud Computing Association (ACCA) thanks the Australian Government Department of Industry, Innovation and Science for the opportunity to provide comments on the Digital Economy: Opening Up the Conversation Consultation Paper (consultation paper). We commend Australia for starting the conversation on the next lap of economic growth, powered by digital services.

As the apex industry association for Asia Pacific stakeholders in the cloud computing ecosystem, we represent a vendor-neutral voice of the private sector to government and other stakeholders. Our mission is to accelerate the adoption of Cloud computing through Asia Pacific by helping to create a trusted and compelling market environment, and a safe and consistent regulatory environment for Cloud computing products and services. We are committed to strengthening cybersecurity resilience, and developing a robust technology ecosystem which supports a vibrant digital economy.

Following discussions with our member companies, we are submitting our responses and comments on the consultation paper, answering specific questions which have been posed.

I would be happy to speak further with the Australian Government Department of Industry, Innovation and Science on any of these items, or host a vendor-neutral discussion between the Department and other members of the industry from the ACCA to provide feedback. Please feel free to contact me if this is of interest.

I look forward to hearing from you, and welcome your response on the issues raised.

Yours sincerely,

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Asia Cloud Computing Association's (ACCA) Response to the Australian Government Department of Industry, Innovation and Science Digital Economy Consultation Paper

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

Comment #1 The founding of the Asia Cloud Computing Association (ACCA) as an organisation was a direct response to the rapid changes being seen in digital technology. As an association, we promote the adoption and development of new digital technologies that have the potential to positively impact firms and economies in South East Asia. The ACCA sees cloud computing as foundational and fundamental to developing digital economies and effecting positive change in the workplace.

Today the internet and technology is integrated into every aspect of our lives. And emerging technologies have started drastically altering the landscape in which we live. As an organisation, the ACCA has been working on how economies can take advantage of the new opportunities technology creates, and find new applications of digital technologies.

Some identified technologies include Software Defined Networks (SDNs) and Network Function Virtualisation (NFV), big data storage and parallel computing, artificial intelligence and machine learning, the Internet of Things and Smart Cities/Smart City living – all of which are impacting every single industry today. Digitisation is driving rapid technological progress and growth, generating tremendous benefits for consumers and employees.

For example, it is now and cheaper than ever for employees to collect, store and analyze data in order to create meaningful insights about customer and product needs - today for <u>less than USD600,</u> you can buy enough storage to store all of the world's music.

In addition, we consider that SDN/NFV will have a positive effect on network resiliency as this technology enables a quick and continuous relocation of network functions in the network in disaster situations by the inherent resilience and load balancing nature of SDN/NFV-enabled networks. Virtualisation in itself is likely to improve continuity of network performance even under difficult (disaster) conditions.

New economic opportunities will also be created with new technologies; for example, the deployment of SDN/NFV will open the competition for more actors such as equipment manufacturers, software companies, application service providers etc.

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?

Comment #2 : The ACCA notes and commends the Australian government's efforts to develop and broaden the IT capacity of the country. We recognise the utmost importance of comprehensive and competitive internet speed and coverage. To neglect such critical infrastructure would leave Australia unable to take advantage of evolving digital technologies in the coming decades.

ACCA also applauds the Australian government's leadership in their 'cloud-first' policy. We believe that in many instances government should be leading the way when it comes to utilising new digital technologies. Demonstrating to business how cloud can be effectively used will promote its

use throughout Australia.

The ACCA commends the Australian government's approach to open public consultations. Being flexible and interactive with businesses and the wider public will produce informed and intelligent policy.

Comment #3: Ensuring that Australian firms remain flexible in the developing digital economy is critical. The ACCA recommends that the Australian government adopt a technology neutral stance in its approach to policy on digital technology. This will help Australian firms embrace new technologies as they emerge, rather than having to wait for explicit regulatory approval. Likewise, the ACCA also recommends that the Australian government allow firms to responsibly outsource cloud data storage without expressed consent from regulators.

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

Comment #4:

Digitization is driving rapid technological progress and growth, generating tremendous benefits for consumers at the same time widening gap between policy and pace of technological innovation. Raising question as to how policy makers will manage or adapt to the explosion of technological innovations. The role of government in paving the way for achieving digital transformation is very critical.

ACCA sees many roles for government in achieving a thriving digital economy:
1. Government should be developing initiatives to engage businesses in the digital economy
2. Government should be open and transparent. Taking into account the experiences of individuals and businesses is invaluable in developing good policy
3. Government must act as a leader in the use of new technologies such as cloud computing and engage with cloud providers to ensure technical standards and compliance regimes are adapted to the cloud model.
4. Government should promote seamless interoperability and interconnectivity within and without Australia.
5. In order to be a relevant and critical player in the future, policy makers need to rethink their design, strategy, operations, and processes in fundamental ways to ensure significant technological developments.
6. The challenge for governments is to seize the opportunity and respond in the form of a policy framework which embraces technological innovation for overall growth.

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?

Comment #5: Australia leads in the following:
- Financial and insurance services
- Property and business services
- Professional, scientific and technical services

ACCA takes the view that the following technologies have will have a transformative effect on the economy:

- Artificial Intelligence (AI) and Machine Learning
- Natural language processing
- Quantum computing
- Software Defined Networks (SDNs) and Network Function Virtualization (NFV)
- Software Defined Wide Area Network (SD-WAN)
- Unified Communications
- Internet of Things
- Machine to Machine Communications
- Cloud Computing
- Augmented and Virtual Reality
- Satellite Technology Developments

ACCA believes these new technologies will address many unfulfilled market needs. Industries where significant disruptions will be experienced are where current players are not meeting consumer expectations, or where market allocation has not been completely efficient. One example would be the transport industry, which has seen significant market disruptions over the last five years.

The benefits of these new technologies aren't limited to known products. One of the key reasons it is hard to make progress on important social challenges in medicine, energy, and science is that even the smartest experts struggle to fully understand the relationships between cause and effect in these systems. New technologies such as Machine Learning and Quantum Computing have the ability to parse the complexity of interacting factors and volume of information, and in turn allow us to design more effective interventions.

Question 7 What opportunities do we have in standards development and regulation to:

a. enable digital entrepreneurship, innovation and trade?

b. mitigate the risks associated with digital disruption?

Comment #6: ACCA would suggest that the Australian government build to play in an international market. This involves:
- using globally consistent language in policy and laws
- adopting international best practices and standards, including flexible regulatory models that unlock innovation and create an environment for a thriving local startup ecosystem
- adopting industry lead international standards

The above will place Australian businesses in an excellent position to compete globally as it lowers compliance costs when operating on a transnational platform. The Australian economy will also benefit as foreign investors may be confident that international standards apply.

Risks posed by digital disruption may best be mitigated by embracing technologies, and promoting its adoption, and investing in education and training to ensure the workforce is well-positioned to benefit from the productivity-enhancing aspects of these new technological tools. Taking such steps will not only ensure Australia is able to harness these technologies to benefit its domestic economy but also be competitive as a technology leader in a regional and global context. A recent report showed that automation could deliver safer, more satisfying and more valuable jobs, and that the

productivity gains could boost Australia's national income by AUD2.2 trillion between 2015 and 2030.[1]

> **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?**

Comment #7: Australia can establish itself as a leading steward and proponent of globally harmonized standards and compliance regimes to foster a thriving digital economy and become an attractive hub for global supply chains. New technologies also present opportunities for Australian businesses to break into global supply chains. Recommendations in line with the above include ensuring:

- Australia follows global standards for encryption and security, as defined by the ISO and other recognised international bodies,
- Cross-compliance with other Asian economies and other regional platform privacy rules such as the APEC Cross-Border Privacy Rules (CBPR) and others,
- Digital and technological ecosystems are dynamic and complex. Policy frameworks need to be flexible to accommodate rapid changes in markets, technologies and business models, while ensuring certainty and confidence for stakeholders to take risk.
- The security and integrity of the networks and services
- Exploring the adoption of blockchain systems, as that will lower costs in many supply chains. Current time lags between supplier and buyer transactions represent an inefficiency that may leave exporters short on liquid capital and unable to take advantage of business opportunities. Blockchain solutions reduce these transaction costs and lags; this is particularly apparent in finance markets.
- Support and encourage met of cloud data and its big data analysis capability, which will enable firms to better target trends in markets.

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

Comment #8: Anecdotal evidence suggests that the following barriers are limiting Australian businesses:

- Limited infrastructure: specifically, current IT infrastructure falling well short of bandwidth standards for business and rural areas with limited access,
- Lack of digital literacy within firms and organisations**,**
- Ease of access, fear of vendor lock-in, simplicity of pricing, no intuitive return on investment. These all become extremely important considerations when dealing with SMEs.
- Cloud computing specifically, has largely been sold on the basis of reducing cost, through outsourcing internal expense and operation. But SMEs don't spend to save money – **SMEs spend to make money, or to increase the chances for increasing revenues. SMEs spend to increase reach and relevance.**
- Prescriptive security standards and compliance requirements designed for on-premise technical infrastructure, slowing down cloud adoption.
- Prescriptive rules regarding localisation of data and cross border transfers should be avoided and facilitated accordingly subject to the proper privacy protections being in place

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[1] http://www.alphabeta.com/the-automation-advantage/

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

Comment #9:
Beyond the traditional telecommunications landscape, SDN and NFV are likely to be instrumental in the development and roll-out of innovative services, applications, and products. These trends include connected cars, augmented reality, virtual reality, and universal communications.

SDN/NFV will have a positive effect on network resiliency as this technology enables a quick and continuous relocation of network functions in the network in disaster situations by the inherent resilience and load balancing nature of SDN/NFV-enabled networks. Virtualization in itself is likely to improve continuity of network performance even under difficult (disaster) conditions.

Deployment of SDN/NFV will open the competition for more actors such as equipment manufacturers, software companies, application service providers etc.

SDN/NFV technology is in its nascent stages and governing standards are still in flux, but policy frameworks should emphasis early and substantial support for technological innovation. The ACCA encourages a pro-investment approach that reflects in the telecommunications regulatory framework to be taken, as that can be considered a driver for SDN and NFV deployment.

Some further suggestions include:

- Policies that enable the adoption of cloud services as if it were any other form of outsourcing. Specific regulatory approval for the use of cloud services should not be required.
- Regulations should not be prescriptive in terms of cloud contracts.
- Where regulation is deemed necessary 'phasing-in' and 'sunset periods' should be employed for new technologies. This ensures a gradual but mandatory transition
- Digitising government services and obligations. For example, the digitisation of taxes will strongly incentivise many firms to increase digital capability and literacy.
- The regulatory policies are largely written with a focus on consumer/retail markets and do not necessarily recognize the specificity of enterprise customer networks and services very well especially data. Therefore recognition of the enterprise specificity is very critical.
- Avoid regulations which could stifle the natural growth of new technologies.

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

Comment #10: The ACCA represents and provides a forum for a multitude of stakeholders (hardware and software developers, carriers, enterprise users, policy makers and researchers) with the intention removing obstacles and leveraging opportunities in Asian markets. This takes the form of the following special interest groups (see http://asiacloudcomputing.org/aboutus/sigs):

- **Public Policy and Regulatory SIG**: works to ensure that the interests of the cloud computing industry are represented and to contribute to public policy.
- **Data Governance SIG:** develops and promotes cloud-friendly security governance and best practices to enterprises and policymakers.

- **Asia Analytics Alliance SIG:** industry application group
- **Financial Services Industry SIG:** industry vertical group

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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?

Comment #11: The ACCA recommends that the Australian government promote **lifelong learning programs** for the Australian people. It is critical that there are resources in place to provide people with the digital literacy they need to succeed in coming decades. This may have to take different forms depending on the population in question. Employees may need on-the-job training to enable them to adopt and innovate with new tools. In contrast, senior citizens often need basic digital literacy skills so they can remain connected with community and family.

ACCA would also like to recognise the Australian government's efforts in connecting rural areas with essential IT infrastructure. At the same time, we recommend that the Australian government ensure its **resources are adapted for use on mobile**. This ensures that Australians in rural areas may still access critical resources whilst away from fixed point access.

Finally, ACCA would like to observe that there are various populations in Australia who cannot access the benefits of digital transformation, and risk being left behind as Australia progresses in coming decades. The elderly and intellectually disabled in particular will need lifelong support in a country where digital literacy becomes critically important. The ACCA urges the Australian government to press on towards true universal access of the internet and cloud computing, as it continues on its path towards digital transformation.