The Digital Economy: Opening Up the Conversation

DXC Response

1 December, 2017

DXC Technology

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Digital Economy Strategy Team

Department of Industry, Innovation and Science

GPO Box 2013

Canberra, ACT 2601

Dear Digital Economy Strategy Team,

Please find our response to *The Digital Economy: Opening Up the Conversation attached*. DXC has welcomed the opportunity to make a submission to the Digital Economy process. The 22 questions posed are highly pertinent and timely, although rather than answer each one, our response captures DXC's perspectives under the key themes on the challenges. We have also provided relevant information on our digital government work aligned to the Government's agenda, and where our business and others can work with Government towards a world-class digital economy of Australia in the future.

Sincerely,

Catherine Jaktman PhD

DXC Digital Government

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SUBMISSION BY DXC TO THE DIGITAL ECONOMY CONSULTATION

Introduction

For 50 years in Australia, DXC Technology has been harnessing the people and ideas to bring innovation to Australian people and value to the Australian economy. We provide Australian businesses with best-in-class cloud, mobility, security services, application development and modernisation, IT services, workplace, big data analytics and business process services across a range of industries, such as banking, telecommunications, insurance, government and education.

DXC is passionate about the future of education in science, technology, engineering and math (STEM), and we are passionate about developing future industry leaders. DXC is focussed on supporting programs which provide social and economic impact to Australia. DXC's social impact programs such as Dandelion which is a DXC initiative to build valuable Information Technology skills and careers for people on the autism spectrum. Other social impact programs include our partnership with The Gulanga Group to provide education and training pathways for Indigenous Australians into IT. Other programs also include our work with Australian small and medium-sized enterprises (SMEs) to ensure inclusion in large digital transformation programs within the Australian Government.

Approach in this submission

DXC welcomes the opportunity to make a submission to the Digital Economy process. The 22 questions posed are highly pertinent and timely, although rather than answer each one, this paper captures DXC's perspectives under the key themes on the challenges, our work most closely related to the Government's agenda, and where our business and others can work with Government towards a world-class digital economy of Australia in the future.

The Role for government and the private sector

Massive change is coming to the government sector, enabled by new technologies and the demand for empowered citizens and employees making it simple, cheaper and faster for to deliver citizen services. Instead of delivering services through traditional channels, agencies are expected to deliver new services that inspire public trust by holistically delivering outcomes that meet the rapidly changing needs of citizens and requirements of government policies. These services must be simple and flexible enough for citizens to evaluate, tailor and consume through multiple channels, even if the services are composed of several discrete services that come from different agencies or groups. To deliver on these growing expectations, government agencies can make substantive progress in three key areas: modern collaborative workplaces, hybrid cloud platforms and integrated digital service management. To do this, government agencies need to develop an ecosystem of partners and value-added service providers, connected through digital platforms.

Government change tends to move more slowly than consumer change, requiring government to start changing sooner than it is accustomed to doing so. Modern governments recognise that if they

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can anticipate citizens' needs, they can be prepared for them and can integrate service delivery closer to the source of need.

At the same time, advances in cloud computing and storage, elastic networks, and sophisticated development and analytics platforms are making inexpensive, massively scalable computing resources available to virtually any government organisation. Powered by automated provisioning and advanced service management platforms, the as-a-service economy is maturing, with more and more of today's enterprise IT capacity consumed from outside partners.

These tools of the digital economy — largely based on open source software and commodity hardware — give government organisations the ability to rapidly try new services, instantly scale those that deliver mission outcomes, and quickly eliminate those that don't. Modern governments are deploying techniques such as multichannel citizen engagement, digital government platforms and citizen identification — treating identity as the new security perimeter. Yet much work remains to be done to simplify and streamline government interactions with citizens and businesses.

Information is at the core of digital transformation in government. Leveraging information with the goal of "putting people first" provides a completely different approach to how technology services are delivered and consumed by government and citizens. Citizens expect consumer-oriented service from their government.

Information is now democratised through the use of modern tools that have become more user-centric. With open, modern data platforms, government can enable an integrated information management process and leverage structured as well as unstructured (digital voice, images, text and video) information to power personalised or tailored applications and services, as well as gain insights that enable new levels of citizen engagement, business agility and operational excellence.

Digital vision for Australia and the role of the government
The digital vision for Australia is to be an innovation leader and continuous adopter of technology which advances service delivery to citizens. There is a need to foster a culture of innovation and digital thinking across the economy, enabled by a government that supports the required changes to policy and legislation to provide advanced solutions.

Government plays a vital role in supporting Australian industry in research and development of innovative solutions. Government also plays a vital role in the adherence of digital standards across government to allow data sharing and access to data which will increase productivity and safety.

Enabling and Supporting the Digital Economy
Public and private cloud providers have greatly expanded their capability to provide ICT services on a subscription-basis to Australian business and government. This has provided significant benefits in reducing the capital intensity of ICT while allowing business to access higher service levels that would have previously been prohibitive. There are, however, two issues that can be addressed to assist in making cloud services easier to adopt for Australian business and government.

Data Sovereignty – Some data must reside within Australian legal jurisdictions and must not travel outside of Australian borders. Due to the way cloud services are architected, data can be moved offshore automatically unless the service has been configured not to do so. Cloud providers can assist with the acceptance of cloud services in Australia, by providing a mechanism of assurance that data is sovereign.

Onshore Disaster Recovery – Related to Data Sovereignty, there is also a need for public and private cloud providers to provide onshore disaster recovery. This necessitates the providers to possess two geographically remote Australian data centres. While the major providers either already have two centres or are planning them, this capability is vital to further adoption, especially by government.

In addressing the opportunities to accelerate technology development to support Australia's digital economy, it is important for Government to consider the foundations that underpin, encourage and drive growth and innovation (in particular in the digital sector), before attempting the acceleration phase.

Successful technology incubators in the United States have proven that easy access to highly experienced and skilled people and capital funding create an environment where the inherent risk of starting a new business is reduced. In Israel, government funding and tax breaks for new businesses striving to innovate in the digital space several years ago, started a cycle of innovation and funding that continues to this day. Capital funds in Australia tend to be overly aggressive in their equity requirements, often due to the rigid taxation of profits they make. Incubators tend to be small and themselves underfunded. While Australia is traditionally a centre of excellence in many research fields, the actual transfer of technology from research faculties to industry is often lacking or non-existent. Intellectual property laws in Australia need to be revised to provide the protections necessary to allow researchers to share their findings with industry without the fear of these ideas being taken without compensation.

There is an opportunity now to improve and encourage the cooperation between industry and research through a review of intellectual property law, taxation policies around employee stock option plans and stock appreciation rights, and the regulation of digital growth in industries such as the financial services. Incubators can be encouraged through government grants to universities, to encourage these seats of research to partner with industry through innovation centres such as the Digital Transformation Centres being created by DXC at the Australian National University and Swinburne University of Technology.

Venture capital funds need to be encouraged to invest in Australian technology firms by a friendly tax regime that will see much of this profit reinvested into second and third generation firms following successful initial exits.

All the above must, however, be combined with an expansion of physical infrastructure to underpin this growth, on Australian territory, so that data sovereignty and privacy issues can be effectively addressed, by law if necessary.

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Challenge Prize Competitions

Many recent innovations such as driverless cars started with a "Challenge Prize" competition where a challenge is set for a technical innovation and the winner is awarded a prize. The prize model has the advantage for government in that it provides a transparent mechanism for government investment that supports innovation while meeting the prudential requirements of government by not "picking winners" and by limiting risk by fixing the investment amount. Generally, the amount invested exceeds the prize by a significant margin.

The XPRIZE is an example of such competitions. In DXC's vision, an Australian prize competition would be open to Australian and Australian resident companies and universities with the challenges being set by the Department of Industry, Innovation and Science where the challenges directly drive items of importance to the Australian digital economy. While not pre-empting any possible prize competitions, some examples of possible competitions could be:

- In Home monitoring – the challenge is to create a simple, adaptable home monitoring capability for older people. This support government objectives of keeping people in their homes for longer
- Agricultural and Horticultural Automation – the challenge is to bring automation to the Agricultural Sector
- Water Management (a current XPrize completion) – the challenge is to improve water management by households
- Health – Medtech Kerrin Reddie Award – operated by the Medical Technology Association of Australia for innovation medical technology that improves patient health outcomes
- Citizen to government interface – the challenge being to eliminate citizen context changes with the overall aim being to eliminate direct citizen to government relationships giving citizens choice of service providers
- Single ask data sharing – the challenge is a framework to allow Australian citizens to easily and securely share data with Australian governments, regardless of scope (federal, state, local, etc.), and only ask for data once
- Government Open Data ecosystem challenge - the challenge is to create a new or major enhancement of existing government service augmented by the use of external data.

The Prize model would lend itself to innovation generally and not be restricted to the digital economy.

Competitive Strengths

Australians are renowned for having a get-on-with-it approach to business. As such, most Australian businesses, from large to small, have embraced digital change in some form or another. This is evidenced by Australian's mass adoption of practical solutions such as contactless payments. However, little of the actual innovation and commercialisation of digital technologies is happening on Australian shores. Government can support innovation by ensuring that competition, and hence innovation is not smothered, and protection of intellectual property is easily understood and available to research and development institutions.

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DXC is making efforts to respond to the need for digital transformation in the Australian market by partnering with local research institutes and businesses (both large and small) with specialities in particular niches, and bringing this expertise to our clients. DXC is also building Digital Transformation Centres in Australia, through which we can quickly prototype and deploy innovative technologies across several market segments. At DXC, we realise that the future lies with small and medium businesses, in addition to existing large corporations.

As such, DXC actively seeks business with small and medium enterprises.
At DXC we also understand that some individuals have certain inherent skills that are naturally suited to working in the technology sector. For this reason, we started the Dandelion Program to help people on the Autism Spectrum establish careers in the information technology field.

In terms of opportunities to improve linkages into export markets and global supply chains, Australia is uniquely placed in the world. Huge distances separate Australian population centres, most of which are on the continent's coasts. However, the majority of Australian primary production happens inland. Australia is a global leader in raw mineral, cereal and livestock production. Thus, we have had to find effective ways in which to overcome the distances separating primary producers from their markets. There is a unique opportunity to embrace digital technologies in order to automate these methods, and make them more autonomous. As such, Australia should be embracing robotic process automation, driverless technologies (which are already fast becoming an international trend), supply chain automation and digital agricultural management in order to improve financial performance and boost yields. This technology can be exported to a worldwide marketplace urgently in need of innovation in this space.

Australia also has world class education systems, the graduates of which often find work overseas. There is an opportunity for Government to incentivise smaller and more remote parts of the country to upskill in STEM capabilities, providing potential onshore lower cost centres, due to the lower cost of living in these locations. Engagement of these communities in the greater innovation discourse will note only invigorate their economies, but will also provide economic assurance to communities currently reliant on primary production alone.

Our philosophy regarding the Digital Economy
DXC considers that dealing with today's digital disruption begins by understanding how it differs from past industry changes. After all, stories of the-end-of-our-industry-as-we-know-it have been a trade press staple for decades. A few key elements distinguish this era of change from the past.

Disruption has accelerated dramatically, and the numbers prove it. A 2014 study from Constellation Research quantified the accelerating rate of change in the enterprise by examining a simple benchmark — the entry and exit of U.S. corporations in the S&P 500 index.

In 1958, corporations listed in the S&P 500 had an average stay of 61 years. By 1980, numbers from research firm Innosight reveal, the average stay had declined sharply to 25 years. In 2011, the

average tenure dropped to 18 years. At the present rate of churn, Innosight's research estimates that three-quarters of today's S&P 500 will be replaced by 2027.

Digital disruption is the primary catalyst of change. While the Constellation study is careful to say that companies rise and fall for many reasons, digital disruption is clearly responsible for a large share. Research shows that since 2000, 52 percent of companies in the Fortune 500 have either gone bankrupt, been acquired, or ceased to exist as a result of digital disruption. The collision of the physical and digital worlds has affected every dimension of society, commerce, enterprises and individuals.

Digital transformation transcends technology. Digital transformation is often viewed through a narrow technology lens, as just another mobile project or e-commerce initiative. Fundamentally, though, digital transformation is the result of enterprises seeking to adapt to the storm of new technology affecting markets and customers.

Effective internal systems, processes and value chains will always be essential, but enterprises will increasingly need to harness the skills, capabilities and passions of the external market. Digital transformation forces wholesale change to the foundations of an enterprise — from its operating model to its infrastructure, what it sells, to whom and how. No industry is immune. Industries dominated by information-rich assets (think: publishing and music) were swept up in the early wave of Internet innovation. The subsequent mobile revolution created challenges for retailers who found customers flocking to online alternatives.

Today, disruptive technology shifts such as cloud, big data and the Internet of Things will not only upend these industries (again), but they will also introduce revolutionary change to even the staidest industries. Specific industries with regulatory barriers or large infrastructure costs will feel greater effects of shifts created by the next generation of IT breakthroughs.

Significant opportunities
The value of the digital economy continues to grow in size and importance to every company in every industry. Nearly 3 billion consumers, businesses, government agencies and institutions of every nature interact every day using computers, laptops, tablets, smartphones and a growing range of mobile devices. The relentless speed of change of customers, markets and technology has given rise to enormous opportunity.

The digital economy is making significant contributions to global gross domestic product (GDP), outpacing global growth by 400 percent. A 2015 report by Boston Consulting Group (BCG) estimated the digital economy would contribute $4 trillion to the GDP of countries in the G-20 during 2016 and would continue to grow at a rate of 10 percent per year. Growth outside the G-20 is even higher, measured at rates of 15 to 25 percent. These figures compare to a rate of 2.5 percent global economic growth, according to recent estimates by the Conference Board. BCG's study also credits the digital economy as an increasingly important source of new jobs, as well as an important catalyst for social and political change.

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Implications for Australia's Digital Economy

In a digital economy, Government mandate is two-fold, namely to:

- Efficiently, effectively and in a trusted way engage and service its required clients/stakeholders, and
- Create the right environment for private enterprise to flourish.

These two responsibilities sit well with DXC's goals, ambitions and offering. Our focus and track record of success is built on business transformation and ICT leadership. DXC is committed to the following:

- STEM Education and training through our programs with universities
- Engagement with Australian SMEs to bring the best capabilities to the government through large digital transformation programs
- Establishment of our Digital Transformation Centres at ANU and Swinburne which will provide leading agile delivery centres for our clients. The Centres will work with Australian SMEs and industry partners to realise the full value and potential of transformation
- Social impact programs such as Dandelion and our work with The Gulanga Group for Indigenous IT education and training.

As well as providing a whole range of technology and information support services, DXC has been committed to driving the development of industry knowledge systems and the development of next-generation technology solutions. We outline some examples of both types of this work which we consider is at the heart of driving a truly digital economy across the whole of Australia.

In our partnership with the University of South Australia and the SA state government, we have co-authored a 4-year ICT degree that includes paid placements in DXC. This ensures that students not only access world-class technology knowledge but also secure the opportunity to work with it and obtain direct and highly relevant IT experience in the workplace.

DXC's partnership with Tasmanian Technical and Further Education (TasTAFE) was designed to build a pathway for students to gain real-world experience. As part of the TAFE course, students are completing a work placement program at a DXC Service Desk COE (Centre of Excellence) and train to the standards of a global IT outsourcing company.

To develop next-generation technology approaches in this country, DXC has announced plans to open Digital Transformation Centres in Australia, providing local clients with the ability to apply the latest digital design and innovation in their digital transformation journeys.

The Digital Transformation Centres will open in the first half of 2018. Their goal is to showcase a new and evolving approach for local clients to re-skill their workforce and deliver digital solutions by drawing on DXC Technology's global experience in digital transformations – and by creating an environment for the incubation of ideas, learning and innovative solutions.

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The new Centres are based on similar models launched by DXC Technology in the United Kingdom and Belgium, and aim to spark new conversations with local clients about digital transformation by offering:

- End-to-end digital services from ideation and change through to development and ongoing evolution, to accelerate large enterprise clients on their unique transformational journeys
- A collaborative, engaging environment focused on generating rapid outcomes and return on investment
- An outside-in approach to capacity-based staffing to deliver outcomes quicker, grow in-house capabilities and foster innovation.

The Centres will provide clients continual access to advisory services, present new and effective ways of working, and help clients design and develop digital solutions to solve business challenges.

Assistant Minister for Digital Transformation, the Hon Angus Taylor MP, said the new Centres would support the Federal Government's digital transformation agenda across the public and private sectors. "Initiatives such as these support our efforts by driving agility and innovation among Australian businesses, service providers and government agencies, as we become more mobile, connected and reliant on technology than ever before."

The first two Digital Transformation Centres will be in Canberra and Melbourne and uniquely co-located with universities, allowing for collaborative research between industry and academia, and the creation a new talent pool of students who will aim to support the evolving needs of workforces and communities as they prepare for a digital future.

In Canberra, the Centre will partner with Australia's leading university, The Australian National University (ANU), with a focus on education, research and innovation contributing to Australia's digital agenda. ANU Vice-Chancellor Professor Brian Schmidt AC welcomed the announcement of the research collaboration with DXC Technology, which aligns with the University's drive to reimagine engineering and technology fit for the 21st century. "This partnership will drive research collaboration and will give students the chance to undertake programs that will benefit government and society," Professor Schmidt said.

The foundation industry partners for the Centre in Canberra include: Tandem.ai, Gulanga, Canberra Data Centres (CDC) and Microsoft. focus on education, research and innovation contributing to Australia's digital agenda.

The new centre will enable collaborative research between industry and academia, and create a new talent pool of students who will support the evolving needs of the business community as they prepare for a digital future. The partnership will also support ANU student work experience and internships within the centre, particularly through the Dandelion program which integrates people with autism into DXC's workforce. DXC will also support outreach in science, technology, engineering and maths (STEM) for Indigenous and disadvantaged students at ANU.

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DXC recently opened a new Innovation Centre at our regional headquarters in Macquarie Park, Sydney, to build on this strategy. The Innovation Centre showcases some of the industry's leading-edge technology and applications in blockchain, artificial intelligence, machine learning, virtual reality and augmented realityper.

DXC's collaboration with government and with academia is the heart of its leadership role in the digital economy. We look forward to working with the Digital Economy Taskforce more closely and are every happy to provide a further briefing on our strategy and initiatives.

Achieving a dynamic, flexible and innovative ecosystem through constraints and discipline (Standards and Regulation)
The Government has the opportunity through standards and regulation to:

- Improve the functionality and value enabled through data sharing and data context, by addressing data usage, data storage, shared common taxonomies and metadata handling. This will enhance the degree of integration, enable improved analytics and how data is integrated across the ecosystem. Initial activity might encompass the development of templates to encourage integration and sharing of appropriate data between parties, with later efforts focused on the value add such exchanges provide between parties who do not normally have a relationship.
- Improve the quality of data held by organisations, to improve the trust in resulting decisions made using this data. With more automated decision making it is important that while Government can't always direct the quality of algorithms used, it should set standards about quality of the data being analysed and involvement of parties to maintain currency. This should also improve credibility and trust, encouraging a higher degree of interaction amongst parties and consumer adoption of digital processes. The use of aged and inaccurate legacy data in new data analytics is likely to generate many poor experiences that can be avoided.
- Accelerate adoption of new technologies by making it easier for business to establish the building blocks of core aspects of digital solutions. By having such foundation services for the digital ecosystem available, it will allow the majority to avoid reinvention and to focus on adding value to interactions at that more personal level.
- Take individuals and organisations on the job transformation journey through education, to:
  - Include of digital basics in education curriculums (high school and university)
  - Ready students for a changed job market, resulting in improved employability and reduced unemployment
  - Enable current workers to transition to the new types of jobs that will be available
  - Ensure a gender gap in the digital capable workforce does not exist
  - Avoid higher unemployment, while demand for new roles remains unable to be filled
  - Remove ignorance as a threat to digital adoption
- Make funding more accessible to new businesses who are adopting digital models through:
  - Support to establish new financial institutions, who are less risk averse

- o Changes to force/enable current banks/etc to proactively engage with businesses where the digital journey is less certain and outside traditional comfort zones
- Provide certainty for organisations so they can proceed without ambiguities regarding their legal protections, public obligations and the safety of their business investments.
- Ensure appropriate levels of safety and privacy exist regarding use of artificial intelligence (AI) and autonomous devices or vehicles.
- Bring all online providers and users up to a basic level of digital competency, through the adoption of leading edge security solutions. The foundational digital platforms could provide lower cost avenues for those who can't afford it and enable the transition, boosting adoption rates. A means to get current participants from a variety of levels to a new minimum level will boost trust, increase interactions and raise overall participation rates. This "entry fee" to become a digital based business has to exist, yet with technology it can be made low cost, readily available and enforceable.
- Enable those affected by security breaches, fraud or illegal digital activities to hold offenders to account. This extends from mandatory disclosure to certification of safeguards.
- Ensure digital identities are used, unable to be compromised and that redress after identity theft is possible. While the digital era addresses the masses, it has to be able to protect the individual also.
- Provide access from all regional areas to enable full participation by all interested parties in digital processes. For the full potential of digital value chains to be realised, people with new ideas and new needs to further stimulate solutions and new outcomes have to be active participants.
- Build trust in how the Internet of Things (IoT) devices are used. For consumer and public privacy to be protected, all parties must understand and be clear on what data can be validly collection and what is invasion of privacy. They must also be clear where consent is required and what the boundaries of exploitation. Being able to track the provenance of consent (allow auditing) is essential to overcome a "she'll be right, mate" attitude in what can be an unforgiving digital world.
- Make it easier to protect intellectual property (IP), yet also easier to licence rights and enable wider/accelerated use of new IP to develop new solutions across all industries.
- Drive local thinking to be conscious of global scale and expose people to global best practice. E.g. Enhance university content to expose students to world class digital ecosystems and cultures so as to create leaders with the necessary mindset.
- Include digital know-how in management level training, to accelerate the rate of change within current businesses.
- Review traditional regulation and policy, focused on an analogue world, to also cater for high growth digital industries by removing the legacy inhibitors and inserting new controls. Having digital aware business experts involved in this process is critical to a successful outcome. The process to transition from the old to the new will have wide reaching impacts and will have to be a carefully managed exercise.
- Align the current industry categorisation to the evolution of businesses in each category. Be able to adapt as new foundational industries and new markets emerge, and as, the yet unknown, value chains of the digital era emerge.

- Balance the commitment to current standards (to get businesses started) with the knowledge that new standards will be needed and we'll need to change to accommodate them. Support to adopt standards and even more support to change as standards evolve will be a critical role Government can play. This support may be direct to a business or indirect via other organisations who support the business.
- Ensure that the Federal, State and Local government tiers are connected and sharing effectively, within and across each tier, so that learnings are shared, economies of scale are created, and overall momentum is generated to create internal change that benefits both staff and the public.
- Consider the use of Artificial Intelligence (AI) and data transformation techniques to allow ad-hoc exchange of data across industries and value chains. This is in contrast to the traditional definition of fixed integration standards. Technology can be used to bridge the gap that exists in human nature to follow direction and conform to well-defined standards, to encourage adoption.
- Produce directions and mandates that are combined with a management of change approach that will result in widespread adoption and commitment by both current and new businesses.
- Provide a suitable context to politicians and bureaucrats so they recognise old problems that are not relevant to the future.
- Assist new digital businesses to achieve scale and to establish a global presence. Keeping businesses onshore will grow the digital critical mass.
- Reinforce the adoption of recognised global and industry standards, so local businesses can participate more easily in offshore activities.

Cybersecurity

Transparency is often seen as a key driver of confidence, and to that end, encouraging organisations to enhance their cyber security stance, to be forthcoming regarding reporting security breaches and theft of customer data can help to reassure the community that their online safety and privacy are taken seriously. Mandatory reporting of security breaches and data theft by organisations that handle data is covered by privacy legislation.

Another opportunity to build trust would be to encourage (or even mandate) the use of plain English versions of software licensing terms and End User License Agreements (EULA), since most people disregard these due to the generally impenetrable language. These license terms describe what an organisation may do with an individual's data and how is it protected, and often poorly understood if not completely ignored – this gives the impression that the organisation is ultimately attempting to deceive the individual, or that it will attempt to evade its responsibilities. This could be supported as a community or industry-based initiative where skilled volunteers develop these translations of EULA terms.

Protecting the community in a digital economy
- Government, business, and individuals need to collaborate to protect the community in a digital economy. Skills, information, insight, discovery and capabilities flow in many different

directions in a digital economy and their influence level may scale unpredictably. Specific individuals for example may carry more expertise influence than an organisation or government department and this asymmetry needs to be accepted.

- Government should continue to provide through appropriate legislation, and by supporting and promoting security initiatives that may not have an immediate commercial justification.
- Online safety in the digital economy needs to be promoted throughout the educational system as more and more people are being connected to this economy at younger and younger ages. Government, business and individuals have a role in developing a curriculum to support such educational goals.
- Business need to educate their own employees in how to protect the business and its clients, which should have a flow on effect in learning how to protect themselves and their families. Individuals need to be encouraged to contribute to the cyber security effort by reporting their experiences with data theft or online scams to the relevant authorities. This will contribute to the available data and help to present a more realistic picture of the state of cyber security in Australia.

Integrity and privacy measures to ensure consumers can protect their data
- Mandatory reporting for privacy breaches and data theft, support for onshore data storage opportunities, mandating onshore data storage for classes of private data.
- Ensuring that a consumer can manage their own data, and request that businesses remove a consumer's private data upon termination of the service agreement (aka: the right to be forgotten).
- A clearinghouse for data privacy breaches that consumers can register their incidents with, that can provide support and guidance in these issues and potentially compel service providers to fulfil their obligations.

Barriers for business, particularly small business, in adopting cyber security and privacy practices
The barriers are complexity, cost, and lack of expertise, and lack of available security practitioners with the relevant skill set and experience. Unfortunately, security is often seen as an afterthought, something that will get fixed at the end of a project, or something that gets in the way of getting work done.

Another barrier is the often unjustified optimistic approach, where the reality of cyber threats is not taken seriously enough.

Integrity measures for the Australian Government and the private sector to ensure business–consumer transactions are secure
Government and the private sector need to support strong encryption, and resist the temptation to weakening this, or inserting backdoor entry methods into encryption products and services.

Both government and private sector need to support disclosure of security vulnerabilities discovered by security researchers, and such discovery must not be penalised if the researchers have behaved in an ethical manner and acted in the public interest.

Conclusion

DXC Technology welcomes the Australian Government's commitment to developing a Digital Economy Strategy and the opportunity to add our voice to the conversation through the consultation process.

With more than 25 years of experience as a major IT and digitalisation partner for the federal government and with wide industry experience in Australia, we are a key stakeholder in the development of this new strategy.

DXC looks forward to participating in ongoing consultations and working with the Department on all aspects of the Digital Economy Strategy.