GNGB
GATEWAY NETWORK GOVERNANCE BODY

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31 October 2019

The Hon Peter Dutton MP
Minister for Home Affairs
By submission

Dear Minister,

Thank you for the opportunity to submit a response to A Call for Views into Australia's 2020 Cyber Security Strategy. The Gateway Network Governance Body (GNGB) strongly supports the view that cyber security and indeed, cyber resilience, is critically important. We are pleased to enclose detailed responses in Appendix A.

As the Governance Body across the Superannuation Transaction Network (STN)* we are acutely aware of the importance of security and education on this issue. As an illustration of the importance the GNGB places on cyber security, we have established a Security Committee of our Board to directly address the issue of cyber threats, increase the awareness of mitigation strategies and play a leadership role in the superannuation industry. The activities of the Security Committee culminated earlier in 2019 in the simulation of an STN-wide cyber incident and response. I enclose our report on this exercise as Appendix C.

The GNGB submission views can be summarized at a high level into the following themes:

1. The leadership role of Government in promoting awareness and understanding of cyber security, development of cyber resilience capability and incorporation of cyber security standards in regulatory frameworks is critical.
2. Cyber protections need to be viewed in the context of the digital ecosystem, with dependencies between sectors, entities and individuals.
3. Greater assistance is required for Small to Medium Enterprises (SME's) which are at risk and often less well equipped in cyber resilience, introducing potential risk to the financial and data ecosystem.
4. The Superannuation Transaction Network (STN) directly or indirectly interacts digitally with many employers in Australia, approximately 694,000 individual ABN's have transacted via the

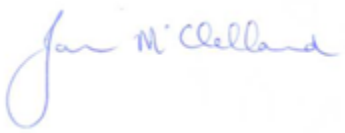
network since July 2018. STN practices and policy can have an important role to play with uplifting the cyber resilience of SMEs.

5. Government has an important role to play in facilitating access to Managed Security Service Provider (MSSP) capabilities, to help reduce the burden of protection for SMEs. In addition, the research is unequivocal in its conclusions that the most effective protection against cyber threats is the sharing of threat intelligence. There is potential for Government to play a centralised role facilitating the delivering of this capability.
6. Government should widen the traditional definition of "Essential Services" to include key financial service networks and payment platforms, such as the Superannuation Transaction Network (STN), to take into account the potential for "Unrestricted Warfare".

Australia has an opportunity, with appropriate Government support to take a leading global position with cyber security and education creating a baseline for resilience against ongoing threats.

We would welcome the opportunity to be involved in further discussions with the government and industry on this important issue. Should you require any further information please do not hesitate to contact the GNGB Executive Officer, Michelle Bower on 0404 844 635 or michelle.bower@gngb.com.au or the Chair of the GNGB Board Security Committee, Ian Gibson on 0408 370 447.

Yours sincerely,



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*Overview of the STN and GNGB provided as Appendix B.

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Appendix A

GNGB Detailed Responses to A Call for Views: Australia's 2020 Cyber Security Strategy

1. What is your view of the cyber threat environment? What threats should Government be focusing on?

The cyber threat environment is becoming more complex and pervasive, and while there are elements that might be location specific, it is international in nature. The ability for cyber threats to infiltrate the daily lives of Australians is becoming greater with the increasingly digitised landscape within which all Australians operate, e.g. Internet of Things and Artificial Intelligence (AI) assisted devices

As a consequence of the broad and complex cyber threat environment, the focus needs to be on a broad range of areas particularly standards within consumer products, educations and skills development, information sharing and collaboration both within our sector ecosystems but also with our international peers. The danger of focusing on specific areas is that it creates pockets of vulnerability, so a broad and balanced approach is necessary, due to the interdependencies of the digital landscape.

Historically cyber security has been seen as a technology issue. There is increasing awareness that it is a business issue. APRA's recent release of CPS 234 make this clear by ensuring directors are responsible and that protections exist on an end to end basis, recognising the importance of third party suppliers' cyber resilience.

2. Do you agree with our understanding of who is responsible for managing cyber risks in the economy?

GNGB agrees with the Government's assessment of the current responsibility allocation for managing cyber risks in the economy. When it comes to cyber resilience, the current focus is on the end users, however this ignores the externalities associated with this approach. The increasing interconnectedness of organisations means that cyber security is less about individual entities or users and more about the ecosystem. The implication is that any cyber security strategy needs to take account of the importance of protecting the ecosystem, the broader environment and recognise that the action of one entity has flow-on consequences for others.

Any regulated entity would have its own safeguards and/or be developing a capability, however the governance around the ecosystem and the recognition of dependencies between organisations is also critically important. There is currently a gap across sectors and entities. For example, who orchestrates identification and assessment of threats when there are multiple interconnected networks – who coordinates the recovery of the ecosystem? Within the STN, the collaboration within our network, under the guidance of the GNGB allows us to fill that gap, however across essential services, both traditional and non-traditional, there is currently limited collaboration that we are aware of.

Government has a multifaceted role with cyber security:

a. As a Business that needs to protect its own assets

b. As a creator of demand for new services and a driver for the development of skills / capabilities

c. As a setter of cyber security standards that different products and service must adhere to e.g. with Internet of Things (IoT) devices

d. As a reference for advice and information sharing, facilitating collaboration and thought leadership

e. As a policing authority to detect and prosecute cyber criminals

f. As a resolution for commercial market failures such as being a service provider where the market has failed, for whatever reason, to address a need

3. Do you think the way these responsibilities are currently allocated is right? What changes should be considered?

Government has a strong role to play in standard and law setting across consumer goods and services and essential networks in relation to cyber resilience.

Government, in collaboration with industry, can play a much broader role with a view to protecting the digital ecosystem and sharing intelligence that can aid in greater protection for all users.

4. What role should government play in addressing the most serious threats to institutions and businesses located in Australia?

Government has a multifaceted role with cyber security:

a. As a Business that needs to protect its own assets
   - ensure that Government assets are protected from cyber threat
   - act as a model of cyber security
   - work within its ecosystem to help all participants to mitigate cyber threats

b. As a creator of demand for new services and development of skills / capabilities
   - Through its education responsibility (both Secondary and Tertiary) to promote the development of security skills and capabilities
   - As an enabler, between industry and educators with a view to build world leading skills development frameworks

c. As a setter of cyber security standards that different products and services must adhere to e.g. with Internet of Things (IoT) devices
   - Many users of services are ignorant of the cyber security implications or do not have the capabilities to adequately assess them

- APRA's CPS 234 is a good example of a regulator setting a mandatory minimum cyber security requirement, however it only applies to APRA regulated entities and their service providers
- Cyber insurance terms and conditions vary significantly, so what is being covered and the risks being borne by the Insured are often unclear

d. As a reference for advice and information sharing
   - Stay Smart Online is a good example of this, however it is not widely promoted and or known about
   - Creating a framework to encourage businesses to digitalise and then to get the basic "cyber" hygiene's right e.g. digitalising, migrating to the cloud, leveraging MSSPs
   - Providing or facilitating a threat intelligence sharing capability to enable businesses' proactive knowledge of criminal activity to better protect against such threats

e. As a policing authority to detect and prosecute cyber criminals
   - Government has a critical role in dealing with state sponsored agents and organized cyber criminals

f. As a resolution for market failures such as being a service provider where the market has failed, for whatever reason, to address a need
   - As a facilitator of access to cyber security managed services for those small to medium enterprises (SMEs) who would otherwise not have that access
   - The uptake of cyber insurance is still low, while the potential consequences for business, especially small to medium businesses, can be catastrophic. The immaturity of the cyber insurance market means obtaining cyber insurance can be difficult and costly; that the terms and conditions vary significantly between providers also makes comparisons difficult;

5. How can government maintain trust from the Australian community when using its cyber security capabilities?

The role that government plays is not well understood

Government has focused its attentions on the "traditional" Essential Services, however the definition needs to be broadened to incorporate new and emerging networks with the potential to cause significant disruption if they suffered a cyber-attack, state sponsored or from other actors, e.g. financial services and data networks such as the STN, Single Touch Payroll (STP), eInvoicing, the New Payments Platform (NPP) and others.

6. What customer protections should apply to the security of cyber goods and services?

See answer to Question 8e.

7. What role can Government and industry play in supporting the cyber security of consumers?

    a. Promoting the development of cyber security skills and capabilities especially at tertiary institutions

    b. Facilitating Managed Security Service Provider (MSSP) capabilities to lower the cost and capability burden on small and medium business e.g. making The Digital Identity Framework (TDIF) as a service available to trusted third parties

    c. Creating the demand to underwrite developing consumer oriented cyber security products and services

8. How can government and industry sensibly increase the security, quality and effectiveness of cyber security and digital offerings?

    a. Promoting developing cyber security skills and capabilities especially at tertiary institutions

    b. Facilitating Managed Security Service Provider (MSSP) capabilities to lower the cost and capability burden on small and medium business e.g. making The Digital Identity Framework (TDIF) as a service available to trusted third parties

    c. Creating the demand to underwrite developing consumer oriented cyber security products and services

    d. Engaging with SMEs with specifically targeted assistance

    e. Introducing the cyber equivalent of an Energy Rating. This would re-assure consumers that the goods and services bearing the “Cyber Rating” has a minimum level of cyber security. It also provides appropriate incentives to companies to strengthen their cyber capabilities and to use secure service providers

Star Rating	Illustrative Compliance Definition
1	• Held the 1-star rating for 12 months; AND • No security incidents in the past 12 months; OR • Held the 2-star rating for 12 months or more; AND • 1 or more security incidents in the past 12 months
2	• 1 international recognised ISO standard; AND • 1 Australia security standard (e.g. Operational Framework)
2.5	• Held the 2-star rating for 12 months or more; AND • No security incidents in the past 12 months OR • Held the 3-star rating for 12 months or morel AND • 1 or more security incidents in the past 12 months
3	• 1 international recognised ISO standard; AND • 2 Australian security standards (e.g. Operational Framework and the STN ISM)
3.5	• Held the 3-star rating for 12 months or more; AND • No security incidents in the past 12 months
4	• Held the 3-star rating for 12 months or more; AND • No security incidents in the past 24 months

* If the company can be upgraded to a new star rating due to compliance to additional security standards (e.g. 1 to 2 or 2 to 3 etc.) but has had a security incident in the past 12 months, the new star rating will not take into effect until 12 months have passed since the last security incident

9. Are there functions the government currently performs that could be safely devolved to the private sector? What would the effect(s) be?

This question is intentionally left blank.

10. Is the regulatory environment for cyber security appropriate? Why or why not?

We agree with the Government's view that the regulatory environment for cyber security is inconsistent across sectors. This approach is consistent with an immature regulatory environment where the initial focus has been on the highest risk areas. A more consistent approach is needed due to the proliferation of digital goods and services delivering an exponential increase in points of access for malicious actors.

11. What specific market incentives or regulatory changes should government consider?

We refer to the case study on page 12 of the Call for Views document. GNGB believes a similar role to the European *Directive on Security of Network and Information Systems* (NIS Directive) could be introduced in Australia with particular reference to the introduction of supervisory powers over essential services (both traditional and non-traditional) including ongoing governance of implementation of cyber security standards.

Such a supervisory role also allows end to end visibility of emerging threats and latest developments which would enable a platform for information sharing and collaboration.

12. What needs to be done so that cyber security is 'built-in' to digital goods and services?

We agree, ideally, digital products and services should have security built in 'by design' so that users do not need to have any expert knowledge in order to differentiate and select products aligned to their individual risk appetites. By developing standards and certifying goods and services against those standards, the Government could be providing a simple comparison point for consumers to make informed decisions, without expert knowledge on information security requirements.

These standards could then be specified as part of tendering requirements (initially via government procurement) and subsequently adopted by industry. This would be aligned to the Government's previous practices of leading by example.

Greater awareness by consumers would drive demand for higher rated cyber safe goods, which can be facilitated, in part, by government advertising.

13. How could we approach instilling better trust in ICT supply chains?

This question is intentionally left blank.

14. How can Australian governments and private entities build a market of high quality security professionals in Australia?

Two pathways are available to enable the building of high quality security professionals:

- Education – working with tertiary education institutions to provide clarity around qualifications and skills required for a career in information security. Greater definition of careers available in the field and where the opportunities, and the demand for skills exists.
- Attracting talent for other industries/other regions – building the profile of the Australian cyber capabilities and demonstrating leadership in this area will serve to attract talent to the roles required

15. Are there any barriers currently preventing the growth of the cyber insurance market in Australia? If so, how can they be addressed?

Insurance can help policy holders prevent, respond and recover from cyber incidents. The market for cyber insurance remains relatively immature which can result in the following issues arising:

- Lack of standard terms of coverage in cyber insurance contracts
- Small risks pools to understand the risk levels and inconsistency in estimating risk (and therefore premiums)

- Difficulty in obtaining cyber insurance. In some case companies are applying for cyber insurance and are unable to get coverage
- Increasing premiums for those companies able to get cyber insurance coverage
- Mitigation activities undertaken by organisations against cyber risks are not well understood and therefore often not considered by insurers as important in assessing the overall risk profile.

Government could give consideration to introducing a cyber insurance scheme similar to Workers Compensation that provides coverage to all businesses against a catastrophic cyber incident. The Government scheme could be administered by industry and established as a basic coverage scheme with the option for industry to provide top-up / customised coverage, similar to the way compulsory third party car insurance is implemented.

16. How can high-volume, low-sophistication malicious activity targeting Australia be reduced?

Increased education and the raising of awareness with users, especially students (both secondary and tertiary) and SME's, as well as those less familiar with the digital environment, such as the elder generations.

17. What changes can government make to create a hostile environment for malicious cyber actors?

The main focus of government efforts could be on:

- Detection and policing – education of businesses and individuals so that they are equipped to identify issues early and develop monitoring processes and policies to protect their own environments and those they integrate with
- Ensuring mandatory reporting – where a breach has occurred, or is highly likely to have occurred, introduce a mandatory reporting mechanism to government
- Facilitation of active information sharing, possibly on an anonymous basis to encourage participation and remove commercial impact.

18. How can governments and private entities better proactively identify and remediate cyber risks on essential private networks?

Participation in proactive threat intelligence sharing increases the identification of cyber risks. In addition, remediation is a form of business continuity planning. The STN recently underwent testing of a simulated cyber-attack scenario to familiarise participants, including Gateway Operators, the Australian Taxation Office (ATO) and GNGB with the steps required to remediate a breach of the network and build cyber resilience. We enclose a copy of the report on the Cyber Incident Exercise conducted and the outcomes, as Appendix C.

19. What private networks should be considered critical systems that need stronger cyber defences?

To date, most focus has been on the "traditional" Essential Services. While appropriate, it ignores the changed reality that many secondary networks now have the potential to create significant disruption if they were subject to a cyber incident.

The concept of "Unrestricted Warfare" where common things, such as the reliance on technology, are leveraged to become weapons with which to engage in war, requires the concept of essential services to be widened.

These "secondary networks" may include, but are not limited to:

- Superannuation Transaction Network (STN)
- Single Touch Payroll Network (STP Network)
- E-invoicing network
- New Payments Platform

20. What funding models should government explore for any additional protections provided to the community?

If government needs to provide ongoing and sustainable services to the owners of critical systems, then the cost may need to be recovered through direct charges or other alternative funding models, rather than relying on general taxation revenue.

The funding model appropriate to each network may vary, so tailored funding models should be investigated.

21. What are the constraints to information sharing between government and industry on cyber threats and vulnerabilities?

Information sharing is acknowledged as one of the best defenses against cyber-crime, yet it occurs only in limited situations. Some of the issues preventing improved information sharing include:

- Varying involvement across several government agencies
- Concerns about confidentiality
- Concerns about the commercial implications of the required level of transparency

To successfully encourage threat intelligence sharing, a centralised solution must be able to consume and validate the data being submitted by solution providers under attack, de-identify the source of the intelligence and broadly distribute attributes / characteristics of emerging threats.

22. To what extent do you agree that a lack of cyber awareness drives poor consumer choices and/or market offerings?

A lack of cyber awareness drives poor consumer outcomes as cyber resilience is not a feature currently used to evaluate consumer products on a large scale. Increasingly, cyber risks affect consumers with the abundance of readily available vulnerable products. Consumers need to understand the importance of cyber security when selecting products and driving demand.

One option is to include cyber security awareness in schools. Currently schools teach computer literacy but that does not include the protection of information and the consequences of misuse or gaps in cyber protection. The development of awareness of cyber security and engagement in the development of strategies and solutions among the next generation is critical for the future, as they become both consumers and decision makers.

From a commercial perspective, APRA's recent introduction of CPS 234 is a positive step as it formalises cyber security as a business issue that company directors of APRA regulated entities need to engage with. It also acknowledges the dependencies between technologies and operating environments by including responsibility for third party service providers.

23. How can an increased consumer focus on cyber security benefit Australian businesses who create cyber secure products?

This question is intentionally left blank.

24. What are examples of best practice behaviour change campaigns or measure? How did they achieve scale and how were they evaluated?

This question is intentionally left blank.

25. Would you like to see cyber security features prioritised in products and services?

Yes, the GNGB believes this would assist in creating awareness and mitigating risks.

26. Is there anything else that Government should consider in developing Australia's 2020 Cyber Security Strategy?

The Superannuation Transaction Network is a great resource that could be leveraged to improve the cyber security and reliance of all Australian businesses.

- The STN currently connects all Australian businesses with Superannuation funds and the ATO. 694,000 separate employer ABNs have been reported through the STN since 1 July 2018.
- The STN has a relatively small number of access points that are well organized, with a central point of contact and coordination, being the GNGB. The ability to roll out changes and initiatives is an established process (e.g. GNGB and its Gateway Operator Members of which there are 9).

- The STN has the potential ability to directly influence the cyber protection practices of all Australian businesses connecting to it.