Chris Drake
[redacted]
Telephone:
Email: [redacted]

Crypto Photo

Response to "Protecting Critical Infrastructure and Systems of National Significance"

By Chris Drake.

This page alone contains my response – all that follow are supporting evidence to demonstrate the completeness of my understanding of this topic.

Government itself needs to be included in the "National Significance" definition. This fact is beyond dispute; if you remain unconvinced, consider global attacks on electoral systems as just one indicator.

Our government has a great many cyber rules (Essential 8, PSPF, ISM, etc) but unfortunately, they are broadly ignored by almost all departments almost all the time*. Practically no cyber audit finds compliance ever, the ASD themselves are vocally outspoken in their disgust over non-compliance, and there are no working mechanisms to cure problems: all inquiry submissions that embarrass government are routinely suppressed, "privacy" and "security" are used as excuses to bar questions, swathes of departments (Defence) and Government-owned bodies (Australia Post) are immune to FoI scrutiny, and critical problems reported go unfixed years or even decades after reporting.

The cause of those problems is the lack of motivation: there are no penalties whatsoever for non-compliance, no working mechanisms to detect it or to act on reports of it, and little to no transparency.

Government itself, and the public servants who are openly and routinely disobeying cyber laws, need to be held accountable for their lack of actions: there need to be penalties and working disincentives enforced on all those people involved. The private sector should never be held to higher standards and/or tougher enforced rules and/or penalties than our government itself and the public servants who break those rules.

* One excellent example of the breadth of disobedience are the public submissions to the 2020 cyber strategy; a great many of those come from government departments, and almost all that do carry concerned staff reports about widespread non-compliance with cyber laws. Many other examples exist, including practically every cyber audit of government systems available online, ASD reports, and every test I've done personally (e.g. observing lack of TLS on websites, lack of staff fulfilling mandatory cyber roles, lack of action on critical vulnerability reports, and so on).

My submissions always contain supporting evidence of government wrongdoing, and I notice they're always "deemed confidential" or otherwise withheld from publication. It is exhausting to put so much work in, on a topic I know so well, only to have it hidden and disregarded. For this reason, rather than edit my documentation which I expect will never be read anyhow, I am including below my 2020 cyber strategy response and submissions to 5 senate inquiries all relating to government cyber. All the details and evidence you could need to validate my statements above are included, along with my helpful suggestions for how to cure the problem.

I wish you best of luck attempting to solve these issues!

Yours Faithfully,
Chris Drake.

Preface to Chris Drake's "Response to A call for views on Australia's 2020 Cyber Security Strategy" of 27th October, 2019

Chris Drake is a professional Cyber-Security expert. Refer to the last page of this submission for his credentials and experience details.

Chris is an internationally respected expert, published author, and thought leader on the cyber security niche relating to strong protection for everyday people against sophisticated cyber-crimes and fraud. Chris has worked in this niche for 37 years; his patent for defending people and software against malware is the world's most widely-cited security patent of all time, he has spoken at numerous local and international conferences on cyber topics, and has won more than a dozen international awards for his work in this field.

Chris has significant recent first-hand experience with a breadth of cyber-security problems suffered by Australian businesses and government. Over the last 3 years, he has had in-depth cyber-security discussions lasting more than an hour each, with more than 500 senior-level cyber executives representing more than 200 top-tier Australian and International businesses and Governments. Chris has personally made extensive use of multiple cyber threat reporting systems, bug bounty programs, and other mechanisms in his quest to help secure Australians. He has also participated in numerous government advisory panels, including the original 2016 strategy, as well as multiple senate inquiries into cyber failures. He is a member of numerous industry working groups relating to cyber security, and was a contributor to several current cyber standards, including FIDO, DKIM, OpenID, and NIST. Chris led the team that wrote the penetration-testing guide for Australia's Trusted Digital Identity Framework (TDIF, aka, GovPass) under contract to the DTA.

On account of his extensive first-hand experience and broad understanding of actual cyber practice throughout business and government, it is likely that there is no better qualified individual than Chris to provide effective recommendations for inclusion in our next strategy. He hopes that you can put aside the Australian affliction of "tall poppy syndrome", and rather than ridicule or attack his suggestions or motives, stay focussed on the topic: This response exists to help secure Australians: any topic or distraction that is unrelated to the technical discussion of the merit of Chris's recommendations deserves no place in the discussion.

Publication Note

Please publish this submission. If there are parts herein which are deemed unsuitable for publication, please redact or censor just those portions. Please try not to simply censor my entire submission.

Contents

Response to “A call for views” on Australia’s 2020 Cyber Security Strategy. 1

Publication Note 1

Recommendations of Chris Drake 4

Recommendation 1: Appoint Chris Drake as an industry representative on the 2020 strategy panel 4

Recommendations relating to “Government’s role in a changing world”. 5

Recommendation 2: Stop undermining the cyber security industry. 5

Recommendation 3: Stop Blaming the Victim. 6

Recommendation 4: Educate industry, institutions, and government that THEY should be responsible for keeping their users safe. 7

Recommendation 5: Adapt and Innovate. 8

Recommendation 6: Measure effectiveness and outcomes. 8

Recommendation 7: Combine all 30+ threat-reporting bodies into one. 9

Recommendation 8: Compel ASIC to enforce company reporting obligations. 11

Recommendation 9: Amend company annual reporting obligations to include cyber and fraud losses. 11

Recommendation 10: Introduce mandatory cyber and collateral damage reporting. 11

Recommendation 11: Discontinue all location-based cyber activities. 12

Recommendation 12: Discontinue collecting “do nothing” victim statements. 12

Recommendation 13: Ban the public sector from building their own cyber-security products and services. 13

Recommendation 14: Discontinue the suppression of senate-inquiry submission records. 13

Recommendation 15: Discontinue all suppression of public submissions relating to cyber security. 14

Recommendation 16: Convene a royal commission to investigate misconduct throughout the senate inquiry process. 14

Recommendation 17: Resume the publication of ASD security reports. 15

Recommendation 18: Extend mandatory intrusion reporting to all Government departments. 15

Recommendation 19: Amend consumer protection and competition laws to include Government. 15

Recommendation 20: Hold business responsible for losses of their customers. 16

Recommendation 21: Introduce mandatory, publically-audited, minimum cyber security requirements for companies and government departments handling personal data of Australians. 16

Recommendation 22: Fix government scrutiny and compliance. 17

Recommendation 23: Fix government procurement. 17

Recommendation 24: Amend the ASD advice. 17

Recommendation 25: Comply with the ISM and all ASD Essential recommendations. 18

Recommendation 26: Roll out mandatory TLS across all .gov.au domains. 18

Recommendation 27: Overhaul the Freedom of Information (FoI) act. 18

Recommendation 28: Reform official Government cyber-security roles. 19

Recommendation 29: Mandatory cyber auditing (with no self-reporting). 19
Recommendation 30: Prohibition on sharing identity information with non-compliant departments. 20
Recommendation 31: Repair cyber-response capability throughout government. 20
Recommendations relating to “Enterprise, innovation and cyber security”. 20
Recommendation 32: Providers need to do more to protect users. 20
Recommendation 33: Comment on equipping purchasers to protect themselves. 21
Recommendation 34: Discard “minimising upfront costs for industry” wording. 22
Recommendation 35: Best practice Identity and Authentication must be made available to all. 22
Recommendation 36: Software goods must be digitally signed. 22
Recommendation 37: Mandatory security update provision. 22
Recommendation 38: Remove Digital-Identity-Services from Government. 22
Recommendations relating to “A trusted marketplace with skilled professionals”. 23
Recommendation 39: Update your understanding of global industry standards. 23
Recommendation 40: Trust. 23
Recommendation 41: Update cyber training standards. 24
Recommendation 42: Buy instead of Build. 24
Recommendation 43: Mitigate the skills shortage by fixing some problems. 24
Recommendation 44: Penalties and liability enforcement. 24
Recommendation 45: Survey the Australian Cyber Security Market. 24
Recommendation 46: Sponsor Australian products through EPL listing. 25
Recommendations relating to “A hostile environment for malicious cyber actors”. 25
Recommendation 47: Block threats first. 25
Recommendation 48: Prioritize prevention. 25
Recommendation 49: No expanded law capability is needed. 25
Recommendation 50: Properly designed digital identity promises to all but eradicate online crime. 25
Recommendation 51: Cyber-insecurity levy. 26
Recommendation 52: Penalties imposed on attack supporters. 26
Recommendations relating to “A cyber-aware community”. 26
Recommendation 53: Totally discontinue your blame-the-victim approach. 26
Recommendations relating to “Other issues”. 27
Recommendation 54: Discontinue behaviour-change campaigns. 27
A note about insurance. 27
A note about Telstra. 27
Chris Drake’s Comments relating to Australia’s Cyber-Security Strategy 2016 & 2020. 29
My observation of failures from the 2016 strategy:- 29
Attachment 1: Submission to the Senate Inquiry into the Digital delivery of government services. 34
Attachment 2: Submission to the Senate Inquiry into the 2016 Census. 35

Attachment 3: Submission to the Senate Inquiry into the Future of Work and Workers. 36
Attachment 4: Submission to the Senate Inquiry into the Circumstances in which Australians' personal Medicare information has been compromised and made available for sale illegally on the 'dark web'. 37
Attachment 5: Submission to the Review of national arrangements for the protection and management of identity information 38
Attachment 6: Full text of "Deemed Confidential" advice letters informing that embarrassing Submissions will be hidden from existence. 39
About Chris Drake 40

Recommendations of Chris Drake

Recommendation 1: Appoint Chris Drake as an industry representative on the 2020 strategy panel

- The 2016 strategy correctly identified that industry collaboration is "increasingly important", and states that ensuring our online interests are protected requires government and industry "working together".
- "Industry" includes the manufacturers of the products and services which are ultimately required to keep people safe. No other participant has better understanding of the threats and solutions available, than the companies who make the solutions to solve those threats.
- "Industry" also includes the businesses who own and operate the services which need to adapt to better secure their customers – the telco's who need to better prevent fraudulent telephone scam calling, the internet service providers who need to better defend against phishing, malware, and online scams, the banks who need to better prevent their customers losing money, and so forth.
- Chris lead the industry team which developed the TDIF Penetration testing guide for the federal Government; our collaboration produced what is currently the world's most effective and comprehensive strategy for ensuring that the TDIF strongly defends against contemporary and future perceived threats, with nothing declared "out of scope" (thus avoiding the major drawback of legacy pen-testing guides). Chris is ideally suited to do this kind of work once again, which all but guarantees that our 2020 strategy will have an effective and meaningful impact on reducing cyber-crime. Our country desperately needs cyber-crime reduction.
- Chris knows what is really going on, both in Government, and in Industry. He knows what is working, and what is failing. He has been at the "coal face" of this debate for many years, and believes there is no better qualified individual than himself, to assist with drafting the 2020 policy.

Recommendations relating to "Government's role in a changing world".

Recommendation 2: Stop undermining the cyber security industry.

Australia produces many of the world's leading solutions in a variety of cyber-security industries, from quantum communications to advanced authentication. These are extremely effective products that demonstrably solve very complex and difficult problems.

Unfortunately, there is an extremely unhelpful, frequently recurring defeatist theme in all government communications relating to cyber security, which is actively destroying our industry. Take the recent discussion paper for example:

> "we can never be totally cyber secure" (page 14)
>
> "Australia's 2020 Cyber Security Strategy cannot be a magic bullet" (page 20)
>
> "A new Cyber Security Strategy … would be unrealistic to expect it to solve all problems" (page 20)

These abundant and pithy throw-away comments are exacerbating the problem and causing extreme damage:

- When cyber-failures occur, the people in a position to solve the problem tend not to, because they have been repeatedly told it is difficult or impossible.
- When innovative solutions that genuinely solve problems are presented, they are mistrusted and not tested and not deployed, because the buyer has been repeatedly told that "we can never be secure".
- When victims suffer losses, these defeatist statements are being used as excuses.
- Responsible parties are not seeking out solutions when they should be, because they keep being told misleading defeatist advice.
- This defeatist language is preventing everyone from understanding that solutions can and do exist.
- Case in point: the concept of "prevention" is totally missing from the discussion paper page 8, which covers only detection, deterrence, and response! This just one example of the insidious and deeply damaging side-effect of defeatist thinking. Everyone knows that prevention is better than cure, but we've been so poorly trained to accept defeat, that even the concept of prevention gets left out of the discussion paper!
- This language is educating CISO's and others to accept cyber failure!

Regardless of whether someone thinks it's smart or funny or "realistic" to regurgitate those offensive defeatist attitudes, they have no place whatsoever in any government strategy or messaging. Churchill single-handedly overturned similar defeatist thinking throughout his entire cabinet in May 1940, which lead directly to eventual allied victory in WWII. We too need to tackle this intellectual disease, and fully eradicate all acceptance of failure. Cyber security *is* a war: we need to act like we can win, otherwise we cannot!

In short: Stop telling our market that our products do not exist or do not work.

Please remove all those defeatist statements, and stop issuing any and all related defeatist language. Please circulate instructions to this same effect to all government agencies and contractors who issue advice (e.g. The "ASD's Stay Smart Online program", and so forth)

Recommendation 3: Stop Blaming the Victim.

This is my most important recommendation, so let me repeat it in bold:

Stop Blaming the Victim.

Every time you say any of the following, you are blaming the victims; which is to say - you are inadvertently educating the only people who can genuinely keep them safe (their providers), that it should **not** be the role of those providers to keep them safe.

> "Australians continue to fall victim because they fail to observe, or are unaware of, basic online security practices" (p.7) – this is **BLATANTLY UNTRUE** – they become victims, because their providers have not given them solutions that mitigate the well-known, totally foreseeable, everyday problems of human behaviour.
>
> "Cyber security has always been a shared responsibility" (p.8) or
>
> "raise national awareness of online threats" (p.5) or
>
> "Australians need the right knowledge to make cyber-smart consumer choices" (p.16) or
>
> "we need to know how to be more consistent in practicing secure online behaviours" (p.16) or
>
> "increased consumer focus on cyber security" (p.17) or
>
> "Our hope is for all Australians to play a role" (p.18) or
>
> Almost the entirety of the "ASD's Stay Smart Online program" (p.32), or
>
> "behaviour change initiatives" or "user awareness" (p.16)

Stop doing/saying all the above. It should NOT be the job of 25 million Australians to all be cyber experts. Even if it was their job, **which it is not**, there is no practical way you could ever possibly reach all those potential victims with your message, let alone mange to get them to understand and remember such a large and complex message, and that's not even starting on the absurdity of believing that it's even possible for a user to be safe, when their provider has not supplied the security that is architecturally necessary to make safety possible in the first place.

By way of example; the Australian Communications Alliance, (representing Telstra, Optus, and Vodafone), back in 2012, publically called for a total ban of SMS messaging for banking in Australia because it is unsafe.[1] Today, 7 years later, every bank in Australia uses SMS for bank security, despite the existence of hundreds of vastly superior solutions in the market. Besides being impossible to properly educate Australians on being cyber-safe, we are stuck in the position of the companies with whom those users need to be safe, actively refusing to use appropriate technologies to make that safety possible. This is, in part, directly attributable to this "Blame the Victim" mentality. For as long as you keep telling everyone, banks etc included, that it's the Victims' fault – they have no incentive, and don't even realize they should try, to provide adequate protection to their users.

It SHOULD be the job of companies that provide services TO Australians to comply with and offer sensible cyber-security protections, so that those users are SAFE even when they are not cyber experts.

[1] See https://www.itnews.com.au/news/telcos-declare-sms-unsafe-for-bank-transactions-322194

Recommendation 4: Educate industry, institutions, and government that THEY should be responsible for keeping their users safe.

The overwhelming majority of contemporary cyber-crimes relate in some way to impersonation or trickery. From a cyber-security architecture point of view, the "attacker" takes up a position in-between the victim, and some organisation. What this literally means, is that there is nothing you can do at the "victim end" to effectively prevent these crimes, unless you have also done something at the "organisation end" as well (or instead).

For example – the only way it is architecturally possible for someone who is about to be scammed by an attacker impersonating (for example) the ATO – is if the ATO has deployed cyber security which helps defeat impersonation of the ATO.

Or, another example, the only way a bank can guarantee that "friendly fraud" is impossible (for example – elder abuse, or children using their parents accounts and devices to move money without permission etc), is if the bank itself provided those potential victims with working security to defeat it (for example; biometric authentication, instead of SMS-text-messages). The same applies to email frauds (gmail, Hotmail, yahoo, etc), social frauds (Instagram, facebook, twitter), and all other "friendly fraud" situations.

Or, yet another example, co-workers using only passwords (because the organisations they use only offer passwords) are at extreme risk of compromise, because it's easy to observe typed password entry (or view it on security videos), or for that matter any of a dozen other problems that relate to passwords (like phishing, guessing, keyloggers and other related sniffers and scrapers, dictionary-attacks, social-engineering, serverside thefts and cracking, re-use, email-recovery, hacking, password-manager compromise, and plain old reading-them-off-post-it-notes). NONE OF THIS IS THE USERS FAULT. All these problems are easily mitigated, but they all require the provider to give the user solutions which keep them safe (such as password-less authentication for example).

The above are just examples to help you understand the breadth of this recommendation – they are not limiting or exhaustive – there are literally hundreds of other examples where effective security is impossible at the user end, but relatively simple if offered by the provider end (i.e. offered by industry, institutions, and government to their users). We need to tell them they can and should do this, and examine incentives to make it happen.

This is not an easy recommendation – the tide of flawed thinking and the vast assembly of resources all aimed at blaming victims overwhelming. Effort needs to be expended to produce **effective** education that aims to convince the people in positions of responsibility to actually deploy protection, and probably also to educate victims that it is not their fault, and that those victims should pressure their providers to offer effective security.

One difficulty that needs to be overcome is that organisations do not currently have any incentive to protect their users. For example – the role of a company is to maximise profit for shareholders. Wasting effort or money on protecting losses that their customers face, is not *theoretically* a company responsibility when those losses are not being suffered by the company itself (e.g. usually, because the company successfully blames the victim and thus avoids company losses by shifting the full loss to the victim – a situation that has caused more than $1b in reported unrecovered losses by Australians over the last 2 years).

This is literally a billion dollar problem, with everyone who is in a position to solve it having no motivation to do so, and through misguided existing "blame the victim" education – not realizing that they should even try.

Recommendation 5: Adapt and Innovate.

Discussion-paper Paragraph #1 correctly says "we need to adapt our approach" after acknowledging that things are getting worse. The concept of "Innovation" requires discarding practices that don't work, and embracing new solutions.

Change and adaptation in Cyber-Security is very **very** difficult.

From my extensive contact with around 500 C-level cyber executives, I can safely report that the #1 factor they take into account when considering new technology, is their own personal reputation. There is an absolute resistance against trying anything new, against considering any different approaches, and against doing anything whatsoever that all their peers are not already doing. The entire industry is paralysed with "copy each other" mentality.

Instead of asking "What does it solve" or "how effective is it", CISO's and others are obsessed with "Who else is using it", and "what publications (e.g. Gartner) has it been featured in", and "how can they be sure the company will be around" – all questions that affect their own personal reputation (as an advocate for the solution), and have nothing whatsoever to do with efficacy. Case in point: at the SINET61 conference in 2016, with a panel on-stage representing companies who had active cyber-security accelerator programs, I posed the question (eliciting a large audience applause): "Can you share an example of a time when you have on-boarded innovative Cyber Security from an Australian start-up" to the panel, which included Mike Burges (CISO, Telstra), Steve Glynn (CISO ANZ Bank), John Haig (Head of Security & Risk, Dun & Bradstreet), and Nick Scott (Head of Security, NAB Bank). **None of them had any example**. Not even one used any of the technology that their own programs turned out, let alone anything else innovative from anyone else in our industry.

Many of my recommendations herein require that Australia take a different direction to the protection of our citizens – one which is genuinely and measurably effective, but ones which will raise eyebrows because it will be hard to point to "who else is doing it", and this will challenge the "my reputation comes first" mentality of any cyber experts considering my advice. Innovation is not easy – it requires clever people to take action that will draw attention, and in our Tall-Poppy-afflicted culture, that makes people uncomfortable.

Unfortunately, right now, we are not measuring effectiveness on any meaningful scales, making it extremely difficult to understand just how pointless our existing approach actually is. One rough measurement we do have is the annual scale of the problem, which does show a relentless worsening of the situation: more people and more business are falling victim more often, and greater sums of money are being lost, more breaches are taking place, and greater damage is being done. Overall, it is absolutely clear that what we are currently doing IS NOT WORKING.

We need to change. Not just to pay lip service to the idea of adaptation and innovation, **but to actually do it**. My recommendations herein are an excellent starting point.

Recommendation 6: Measure effectiveness and outcomes.

There is no measurement being made of the effectiveness of any Australian cyber strategies.

I counted about 40 measurable outcomes in the 2016 Strategy, and it contained 33 action points itself. Not only was there no measurement taking place of whether or not any of these multi-million-dollar initiatives are working – even the very concept of effectiveness-measurement is missing.

What we do know is that everything is getting worse.

If you do not measure it – you can not know which parts are not working.

As Einstein is supposedly quoted as saying:

"Insanity is doing the same thing over and over, and expecting different outcomes"

Let us stop repeating our mistakes – so we need to measure what we're doing, so we know which ones are mistakes.

Every initiative that the 2020 strategy includes absolutely needs to spell out exactly how the effectiveness of that initiative will be measured, and for measurement to take place.

To be clear: "measuring effectiveness" means exactly that - **not** milestone completions, **not** budget spending, **not** staffing numbers, **not** events, **not** rhetoric, and **not** any other pointless metrics - it means "Is this effort improving the *ACTUAL* security situation in Australia".

- The last public report covering government intrusions was in 2013, where Government-server intrusion (63%) dwarfed all other incidents. Since then, Government is being increasingly silent, while passing laws compelling enterprise to be more open.
- Problems can't get fixed while they're hiding under the carpet!
- The 9-month-late "Review of national arrangements for the protection and management of identity information" and associated submissions has not been released. Why not? Why is it more important to avoid government embarrassment than it is to protect Australians?

Recommendation 7: Combine all 30+ threat-reporting bodies into one.

The staggering duplicity of threat-reporting in Australia is decimating our ability to respond. With so many different places, it's impossible to know how to report crimes and vulnerabilities, and it's impossible for each of those many bodies to take effective corrective action.

This will not be a popular or easy to implement – there is no-doubt a huge blur of state, federal, and some private boundaries, fiefdom's seeking to protect their mini empires, power and budgets and prestige – but at the end of the day, when these are all combined into one single agency – the pooled resources of talent, personnel, and budget can then make a very real and effective one-stop-shop for actually solving cyber issues – instead of the rag-tag mess that currently exists, where by-and-large the only purpose almost all of them serve is an ineffective and dubious statistics-gathering nature. Crimes never get solved. Perpetrators never get investigated or prosecuted. Monies never get returned. Scams never get shut down. Vulnerabilities never get fixed. And nothing ever gets effectively measured.

Some that I know of include:-

- CERT Australia (https://www.cert.gov.au/)
- AusCERT (https://www.auscert.org.au/)
- ACORN | Australian Cybercrime Online Reporting Network (https://www.acorn.gov.au/)
- ACIC Australian Cybercrime Online Reporting Network (https://www.acic.gov.au/)
- AFP - Australian Federal Police (for government-related cyber-crime, and agency related scams, and also including ACT Policing) https://www.afp.gov.au/contact-us/report-commonwealth-crime
- ACSC - Australian Cyber Security Centre (part of ASIO's cybercrime, cyberterrorism, cyberwarfare division) https://www.cyber.gov.au/report
- 8 different State Police forces (for non-government cyber-crime):
    - Australian Capital Territory Police
    - New South Wales Police
    - Northern Territory Police

    - Queensland Police
    - South Australia Police
    - Victoria Police
    - Western Australia Police
    - Tasmania
- 5 JCSC's - Joint Cyber Security Centres - in Melbourne, Sydney, Perth, Adelaide, and Brisbane
- Scamwatch from the ACCC http://www.scamwatch.gov.au/,
- Stay Smart Online (https://www.staysmartonline.gov.au/)
- ISAC: the interbank private sharing network (private for banking - they don't want anyone else knowing what they're doing wrong!)
- CrimeStoppers (https://www.crimestoppers.com.au/)
- ASIC; Australian Securities and Investments Commission (financial and investment scams and fraud)
- ATO - Australian Taxation Office (directly; for tax and ATO related scams) https://www.ato.gov.au/General/Online-services/Identity-security/Verify-or-report-a-scam/
- APRA - Australian Prudential Regulatory Authority (directly, for superannuation related scams)
- Australian Criminal Intelligence Commission (including the Australian Crime Commission and the former CrimTrac Agency) https://www.acic.gov.au/
- AUSTRAC - Australian Transaction Reports and Analysis Centre - mandatory for banks and exchanges
- Department of Home affairs (directly, for immigration related scams)
- Department of Immigration and Border Protection (including the Australian Border Force) [not sure if this is part of the above or not]
- Department of Veterans' Affairs for veteran-directed scams and fraud
- ASD - Australian Signals Directorate for defence-related scams, high-tech government attacks, and critical infrastructure issues
- DIO - Defence Intelligence Organisation – weaponisable threats
- ACLEI - The Australian Commission for Law Enforcement Integrity for corruption issues (is deliberate disobeyance, lies, cover-ups, misleading senate inquiries, and flagrant disregard for the ISM and FoI law a corruption issue?)
- Department of Human Services for Medicare, Centrelink and child support fraud and scams
- IDCARE – a not for profit support service https://www.usc.edu.au/idcare
- Internet Crime Complaint Center (Global, run by the FBI) https://www.ic3.gov/default.aspx

And that's not including all the other joint cyber-security networks, security working groups, meetups, forums, events, threat-sharing schemes, and representative bodies like AISA, AIIA, etc.

As you can see – many of those are run by affected parties (and no doubt there are dozens more I'm not aware of in this category) – the reason they have to do this, is because the existing reporting system is so horribly fragmented and broken, that it cannot be relied upon – necessitating other departments (ATO, defence, etc) to fund and run their own cyber-crime reporting portals!

When we have just one body responsible for all this work, everyone will know how and where to make reports, and that body will know that it's getting all the reports, it will have a complete view of the situation, and it will have the resources necessary to take action.

For example - victims won't have to report directly to the ATO, but the ATO will be assured that it timely receives all victim reports, because it will have confidence in the procedure in place at this single reporting portal to properly convey the message. Additionally, this single portal will then have a dependably complete picture of ATO attacks.

We can't solve this problem if we don't adapt. Amalgamation might sound hard, but the benefits are so staggeringly immense that it will absolutely be worth it.

Recommendation 8: Compel ASIC to enforce company reporting obligations.

Despite our banking industry suffering regular and large losses to cyber-crime and fraud, not a single one of any of our major banks lists any of their cyber or fraud losses in any of their ASIC filings or shareholder reports.

Shareholders and customers alike have no insight into the cyber competence of their banks. Banks have their own private crime reporting body, which additionally robs Government and others from any knowledge of the true state of the problem.

Banks are the most heavily regulated businesses in Australia. This is for good reason: they are responsible for generating profits to shareholders. They are not responsible for the protection of customers, or even for the ethical treatment of them, as was widely uncovered in The Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry.

It is not just that they cannot be trusted to behave ethically in relating to cyber security – it is that they have little to no obligation to do so, and there is no enforcement of the existing laws that could shed light on their cyber performance. This needs to change.

In addition to reporting cyber and fraud loss, banks need to report insurance claims as well. One of the methods to cover up the scale of their cyber problem is to shift the loss reporting into other accounting categories. This is not appropriate behaviour, and needs to be prevented. Losses need to be reported as losses. Insured-losses need to be reported as losses, along with the insurance payouts that covered them, and all this needs to be made available to shareholders, who have a legal right to know how adequately their company is managing these losses, and how this ultimately affects their dividends.

Recommendation 9: Amend company annual reporting obligations to include cyber and fraud losses.

While existing ASIC laws may solve some reporting cover-ups, ideally, legislation amendments making cyber and fraud loss reporting to shareholders mandatory would be better. As long as there are loopholes allowing businesses to cover up their cyber ineptitude, there is never going to be meaningful reduction in crime. The potential for public embarrassment and share price falls as a result of enforced cyber reporting are powerful incentives for business to do the right thing and protect themselves and their customers properly in the first place.

Recommendation 10: Introduce mandatory cyber and collateral damage reporting.

When a company (such as a bank, telco, stock-exchange, etc) successfully transfers a cyber or fraud loss to its customer (typically by blaming the victim for “poor cyber hygiene”, for malware, or through oppressive terms-of-service agreements etc), this needs mandatory reporting.

The company needs to be compelled to collect statistics of the losses that have been suffered by its customers, especially in cases where the company believes the fault might lie with the victim. These statistics need to be audited for completeness, with heavy fines for omission and cover-up.

As it stands, there is currently no working mechanism by which consumers can determine which businesses have acceptable cyber protections for their customers. A working method to assess actual customer losses is needed. Remember – companies have no incentive to protect their customers, because company responsibility is to

shareholder profits. Giving customers a way to reject poorly behaving companies gives those companies the strong motivation they are currently missing to offer improved protection to win customer business.

Case in point: All of Australia's top banks are "Major Sponsors" of the "Stay Smart Online" campaign – a misguided government initiative that goes to extreme lengths to "blame the victim" and educate our country that it is their fault when they suffer cyber losses. Those banks include Westpac, ANZ, Commonwealth Bank, NAB, Bank of Melbourne, St.George, IAG. It also includes Telstra – the worst offender at refusing to take any action against the massive problem of telephone scamming sweeping our Nation. Clearly – they all have the most to gain, by ensuring that we keep blaming the victim, and to ensure that the largest amount of loss is borne by those victims, and not the banks themselves.

One of our country's most-expensive ex-politicians, Anna Bligh, is the head of the Australian Banking Association – a well-funded, highly-active lobby group in place to defend the banks against regulation (that is to say – to defend the banks against laws that would protect customers). The ABA and banks are no-doubt going to fight hard against anything that might increase their regulation. We need to be prepared to take on the power of these organisations for the benefit of Australian Banking customers – because right now, protecting customers against cyber threats is NOT any obligation that a bank currently holds, yet the only architecturally possible way to actually protect a customer requires that a bank deploy an effective solution. Right now, no bank has one – the best on offer is technology invented in 1984 – before the web even existed.

Recommendation 11: Discontinue all location-based cyber activities.

Australia is far too vast to expect everyone to go somewhere for activities that relate to online topics like cyber security. Not only are our cities thousands of kilometres apart, 48% of Australians do not even live in a metropolitan area at all.

It makes no sense to have any "centres" – it robs regional and smaller city Australians of resources they need, and it is entirely unnecessary. Dial-in and Video-conferencing facilities are abundant and low-cost.

There is also a considerable amount of interstate bickering, duplicity, and one-upmanship, which is wasting resources and is detrimental getting on with the job of securing Australians.

Case in point: the "Joint Cyber Security Centres" should **not** be proud – they should be **deeply ashamed** of their monumental resource wastage from establishing locations in Melbourne, Sydney, Perth, Adelaide, and Brisbane. See also my recommendation 7 – none of these should exist at all.

Recommendation 12: Discontinue collecting "do nothing" victim statements.

Almost all our current cyber-crime reporting endpoints take no action from reports. This is not acceptable.

Every time a victim makes contact, the very first action that needs to take place, and immediately, must be to prevent more victims.

If it was a telephone scam, the calling route needs to be immediately barred. If it was a payment scam, the money reception endpoint needs blocked so no other victims can pay into it. If it was phishing, the site needs to be taken down.

It is absurd to think that merely collecting statistics from victims is a good idea. Once the victims discovers (usually at the end of a timewasting and painful reporting experience) that no action will be taken – they will never in future

report any more crimes, because they know there is no point. They will tell their friends not to bother too, because they now know that there is no point – that the money is lost – that nobody will do anything about it.

This in turn makes the collection of those statistics pointless – you no longer have any true representation of the scale of the problem.

When the 2020 Strategy goes into effect, there must not be any reporting entity in Australia that is not actively committed to taking action on each and every report they receive. Without this requirement, there can be no useful purpose to any kind of reporting at all.

Recommendation 13: Ban the public sector from building their own cyber-security products and services.

Cyber security is extremely complex, and requires experienced experts to get everything right. There are simply not enough cyber workers in Australia to expect that the public service would ever have access to the experts they might need to build quality solutions.

In addition, it is inappropriate to use taxpayer funds to hire expensive contractors and more public servants to build things that directly compete against our existing industry products and services.

Government projects routinely cost 10 to 1000 times more to make than if they had just purchased an industry solution in the first place. Government ICT projects almost always fails, usually at spectacular expense, are never properly secure, are never commercialised, are usually duplicitous, and rob Industry of jobs, income, adoption, commercialisation opportunities, and rob the Australian Public of quality secure services, and online protection.

Government are not under any obligation to (and routinely do not) comply with consumer protection laws. They have no effective oversight or auditing. There is almost no compliance with the ISM and other security standards, there are no penalties for refusal to comply or for failure, and no transparency.

According to ASD reports, cyber intrusions into Government Systems outnumber all intrusions to every other system combined – a rate of 4 new intrusions every day, with each one taking an average of 9 months before discovery. Reports about the scale of cyber problems in government are routinely classified, are not available under FoI laws, and public servants regularly mislead inquiries, publish false public compliance statements, and simply cannot be trusted to follow adequate cyber practice.

The only way to deal properly with such a massive problem is to outlaw it entirely. Industry are experts at what they do. Buy and use their products and solutions – unlike government, industry are accountable, laws do apply to them which they must follow, penalties do exist for non-compliance, and they have access to genuine experts in their fields.

Recommendation 14: Discontinue the suppression of senate-inquiry submission records.

All records of me having made cyber-security-related submissions to the following senate inquiries have been deliberately hidden.

- Senate Inquiry into the 2016 Census.
- Senate Inquiry into the Digital delivery of government services.
- Senate Inquiry into the Future of Work and Workers.
- Senate Inquiry into the Circumstances in which Australians' personal Medicare information has been compromised and made available for sale illegally on the 'dark web'.

The fact that submissions can be "deemed confidential" and completely censored (rather than published with redactions) is itself highly questionable, but the widespread practice of deliberately destroying the records of submissions **as well** is an unmistakably corrupt practice.

It is bad enough that the public service itself are in charge of managing senate inquiries into public service disasters, but when they are given carte blanche to totally suppress everything that makes them uncomfortable, including all records of themselves engaging in this practice, it goes far beyond acceptable. Everyone, Senators and the general public alike, absolutely have a right to know how often this suppression practice e is taking place, and against whom this power is being wielded. It's bad enough that our country has a near totally dysfunctional Freedom-of-Information system along with near zero transparency on government operations, but when even the very practice of oversight itself is being so widely corrupted, action needs to be taken to prevent this continued abuse of process!

One example:-

THE SENATE

STANDING COMMITTEE ON FINANCE AND PUBLIC ADMINISTRATION

Inquiry intoDigital delivery of government services

I am writing to acknowledge the receipt of your submission to the above inquiry, and to advise that it has been accepted by the Committee as a confidential submission. We will not be providing your submission to anyone on request and it will be not be listed on the committee's webpage.

Recommendation 15: Discontinue all suppression of public submissions relating to cyber security.

Along with the above submissions, all of my other submissions to public cyber consultations, have also been suppressed, as will almost certainly be this one I'm writing now as well (Before working on this submission, I wrote asking the Department to guarantee its website pledge: "Responses received will be made publicly available.", but in their reply they refused.).

All public submissions to government inquiries, reviews, and consultations should be published. If confidential material needs to be suppressed, there should be a formal review process (with rights of reply and appeals) and any censorship should use "blacking out", instead of the existing practice of a total cover-up of submissions.

Recommendation 16: Convene a royal commission to investigate misconduct throughout the senate inquiry process.

Senate inquiry proceedings are broadcast online. This should be a rare opportunity for the public to gain insight into the oversight process of their government, and how it operates. It should also be a place where public servant misconduct should be brought under a microscope, so they can learn from their mistakes, and implement change to improve their systems, like their severely-lacking cyber security practices.

From the questions and answers posed in the inquiries I have participated in to-date, it is abundantly clear that my submissions were neither read nor considered by Senators. Post-hearing, I made contact to ask if senators received my submission at all, and no Senator was able to confirm they did.

Additionally, my requests to appear as a witness at inquiries were denied, and the deliberately deceptive and outright malicious responses from some of the department heads under questioning was nothing short of disgusting. Frequent blatantly-false answers were given and never questioned, important questions were conspicuously avoided and the "avoidance" accepted as an "answer" (for example: the question "Was the department in compliance with the ASD mitigation strategies" was answered with a long-winded explanation of what the ASD mitigation strategies are, with no mention whatsoever of compliance [my suppressed-submission detailed dozens of items of non-compliance, with evidence] and no answering of the question; and this was accepted as an "answer" and the topic moved on). Third parties (such as Industry in general) are routinely (and often wrongly) blamed for failures, but are never given right of reply.

Ultimately, these inquiry findings are catastrophically flawed, having been based on blatantly false testimony, missing submissions, refused witnesses, and "zero interest" questioning, yet the useless findings that result go on to become part of Australian government policy.

The process it utterly broken, and desperately needs fixing.

More than a year after each of the 4 inquiries I participated in had ended, **all** of the many cyber-vulnerabilities that I had detailed in my submissions was still active and unpatched on government systems.

Recommendation 17: Resume the publication of ASD security reports.

The Australian Signals Directorate produces reports on the state of cyber security throughout government. Several years ago, these ceased being made public.

There is a general culture throughout Australian Public Service to withhold and censor all material that is embarrassing in nature. This needs to end. There are already no penalties for non-compliance, no repercussions for failure to adopt adequate cyber practice, and no oversight mechanisms (most cyber-related departments are exempt from the FoI act, and those who are not, openly violate FoI principals and simply deny all cyber-related requests and refuse to release anything embarrassing). The current practice of "blanket-ban" on government cyber-failure-publicity is robbing our nation of the only incentive that used to exist to help encourage agencies to be secure.

Bring back these reports. The ASD themselves express frustration at having no working mechanisms to compel departments to adopt their advice – these reports can make a big difference.

Recommendation 18: Extend mandatory intrusion reporting to all Government departments.

The cover-ups are preventing remediation, and there is already no penalty for failure or non-compliance. The fact that the word "security" is involved typically provides everyone at-fault the perfect excuse for hiding their mistakes. There needs to be public reporting of all incidents. No other method exists that is working to bring departments into compliance. Public ridicule is a powerful incentive – use it to keep us safe.

Recommendation 19: Amend consumer protection and competition laws to include Government.

It is grossly unfair that industry has to compete against government in the first place (for example – when government decides to build its own cyber security and identity solutions, instead of just buying already-built and working solutions from Australian providers), but when the Government does not have to abide by normal consumer rules, it's doubly unfair.

For example – DTA marketplace price-caps would be illegal[2] if they weren't Government. "Clear and reasonable rules that protect consumers and keep risky businesses out of the market are good for everybody." (p.11) – this needs to apply equally to Government.

Recommendation 20: Hold business responsible for losses of their customers.

eBay does nothing to take-down obvious scams. Telstra does nothing to prevent scam phone calls. Banks do everything in their power to shift losses to their victims. None of those businesses buy cyber protection for users, because they believe it's cheaper and easier to avoid/insure the losses – blatantly disregarding the costs this imposes on their victims.

A business is obliged to provide profit to shareholders, but not obliged to offer protection to its customers. This is precisely the problem that the concept of "legislation" exists to solve.

For example – Chinese sellers of fake-capacity SD cards and USB memory sticks rake in $millions of fraud dollars by selling low-value worthless devices to hundreds of thousands of Australian victims on eBay and other sites. Each victim only suffers "tens of dollars" in loss (along with the destruction of whatever photos, memories, and other data they lost from using the fake device). This low-single-loss all but guarantees that nobody in Authority takes any action. (See also my recommendation 7 – someone needs to travel to China to locate the factory producing these counterfeit-capacity devices, and shut it down).

The eBay refund process is extremely time-consuming – often taking more than an hour (spread out over more than a week) to claim a meagre refund, and often only when the victim spends more money than the item cost to return it (and, breaking the law – shipping counterfeit goods by post is a criminal offence). This appears to be a deliberate decision by eBay (and PayPal) to minimise losses to their business: the greater the obstacles they place on the refund pathways, the less refunds they have to make, and the more profit they get to keep. This also explains why I have never been able to convince eBay to take down the dozens of low-value scams I have identified and tried hard to get them to remove.

Enough is enough. When just one victim suffers a crime that has been facilitated by an uncaring provider, that provider needs to be held fully responsible for the losses of that crime, not just to the victim who reported it, but to every other victim as well who did not take the time to deal with the reporting process. When eBay knows a seller sold 1000 fake memory cards, it needs to refund all 1000 buyers as soon as just one buyer proves one was a fake.

This, and all similar situations, needs to be law.

Recommendation 21: Introduce mandatory, publically-audited, minimum cyber security requirements for companies and government departments handling personal data of Australians.

These mandatory requirements need to include making the option of AAL3-strength logins available to all customers, using best-practice TLS website security on all pages, operating telephone mutual-authentication for inbound and outbound calls to prevent scammers and imposters, mandatory digital signing of code and applications they supply to consumer computers and connected devices, and so on.

The vast majority of all cyber-crime is easily prevented, but the companies and governments in a position to deploy prevention have no incentive to do so. Put this incentive in place.

[2] See https://www.accc.gov.au/business/anti-competitive-behaviour/cartels/price-fixing

Recommendation 22: Fix government scrutiny and compliance.

This statement: "Government's activity is also regulated strictly by law and subject to extensive external and independent scrutiny to protect the privacy of Australians" (page 9) needs serious examination: who said it? What makes them think this is true? Why is this in direct contradiction to every experience I've had? – If there really is any scrutiny at all, it's either wrong or being ignored (if you talk to the ASD, their #1 complaint is that departments ignore them).

This is a HUGE topic. I invite you to read my 5 attached recent submissions (all suppressed) to senate inquiries and reviews for extensive examples of Government non-compliance with laws and standards, and strong evidence that no scrutiny is taking place and little to no corrective action is being taken.

Recommendation 23: Fix government procurement.

Australian cyber vendors should not have to find every department who needs their protection, and deal with the lengthy sales and crushingly difficult procurement process.

Those departments should KNOW they need to secure themselves, and should actively seek out our solutions and buy them. The DTA marketplace is totally dysfunctional – almost the only thing departments can buy, are contractors to build new solutions that compete against industry!

See also – my reform recommendations for the ASGN – someone needs to survey our industry, so government can be provided with an Australian-supplier-catalogue of products and services to choose from.

Recommendation 24: Amend the ASD advice.

ASD advice exists that bans the use of "strong security" techniques for low and unclassified purposes. This needs to be changed. "strong" does NOT mean "slow" or "expensive" or "inconvenient" or "hard" etc – all advice discouraging "best practice" in all situations needs to be removed.

In addition, I strongly question the appropriateness of using "risk analysis" methods for determining cyber protective requirements. It is simply impossible to adequately determine the cost to individuals of the compromise of their personal information, or for any layperson (including many cyber-trained professionals) to fully appreciate the breadth of different consequences behind a breach. The word "risk" itself is also ambiguous; a breach risks both department reputation, and typically also many other 3rd parties, and with such a staggeringly vast arsenal of attacker techniques (including misusing stolen information in confidence tricks) it's utterly impossible to appreciate the full extent of risk to those parties. (simple example: a pet-registration database might seem low value to a council, but an attacker can use that in dozens of ways – such as bypassing victim passwords by exploiting recovery mechanisms that asked "What is the name of your Dog")

Best-practice highly-secure modern cyber solutions are often less expensive, faster, easier, and always more secure than most legacy ones. There is no excuse for using risk-management methodologies to produce excuses for allowing legacy low-security protection of anything.

Prevention is always the best strategy. It's not difficult or expensive to simply specify "the best" in almost all circumstances. Discontinue accepting compromise – it's unnecessary and counter-productive.

There are many other questionable items of legacy advice from the ASD. It would be a good idea to convene a committee in collaboration with industry to update this advice to accommodate contemporary technologies and solutions.

Recommendation 25: Comply with the ISM[3] and all ASD Essential recommendations.

To the best of my knowledge, there has never been an audit that has demonstrated full best-practice cyber compliance of any government department – State or Federal. The most recent 3 audits I am aware of are here: https://www.qao.qld.gov.au/report/managing-cyber-security-risks - all 3 departments were easily breached, and as usual - none came close to adequate compliance.

Functional auditing and severe penalties for non-compliance need to be put in place – I've tried extremely hard for many years, and on more than 100 occasions, to try and get half a dozen departments to comply with some rudimentary and basic best-practice cyber security, with no success. The practice of ignoring the problem and refusing to comply needs to end, and this can only happen when consequences are introduced for failures.

Recommendation 26: Roll out mandatory TLS across all .gov.au domains.

HSTS, HPKP, and Expect-CT should all be enabled for the entire gov.au TLD and all subdomains.

There is no excuse for not using TLS in 2019 and beyond – these security technologies will force all departments to be secure, whether they like it or not (and, the bulk of government departments do not like it – but they should never be entitled to their misguided opinions when citizen identity/security is at risk).

Update Oct 2019: the latest ISM makes ubiquitous TLS mandatory "Security Control: 1552; Revision: 0; Updated: Oct-19; Applicability: O, P, S, TS **All web application content is offered exclusively using HTTPS**." – so enabling HSTS/HPKP/etc across all gov.au domains will guarantee that all departments are compliant!

Ubiquitous TLS on gov.au is a minor adjustment that can easily be made in less than one day of effort. Any department that does not already support it will find their web site temporarily stops working, at which point they can follow the simple and free instructions that make their site secure – and bring them into ISM compliance with control 1552 above.

Recommendation 27: Overhaul the Freedom of Information (FoI) act.

There are too many exemptions in place that allow (and are increasingly now used by) departments to cover up embarrassment, despite this practice being clearly and specifically banned in the FoI act itself.

There are also too many departments with broken cyber security who are not subject to the FoI act at all.

There are government-owned "commercial" entities that compete against Australian businesses and handle Australian personal data on behalf of government, who are also immune to the FoI act.

There is no working review process for FoI violations, and from the recent experience of myself and others, there is a sudden shift throughout the public service to deliberate non-compliance with the act (complaints about FoI compliance violations have doubled in the past 12 months).

[3] See https://www.cyber.gov.au/ism

No lawyer should ever be involved in any FoI request: it is an insurmountable conflict of interest – the duty for which lawyers are employed is to protect an agency, while the letter and intent of the FoI act is to release information, even which is embarrassing, about the agency.

There needs to be a department of FoI, staffed by officers who are not affiliated with the departments who receive FoI requests, who should travel to those departments to oversee the fulfilment of the requests and compliance with the act.

It is grossly unfair to expect public servants who have made mistakes, broken laws, refused to comply with cyber standards, or engaged in other wrongdoing, to be forced to engage in the handling of FoI request that seek to shine light on their own misbehaviour. As it stands, those miscreant persons are abusing the FoI process to protect themselves, confident in the knowledge that there are no penalties for violating to FoI act, and no laws that exist to compel them to comply with review directions (if any review ever gets done, which take more than a year to begin anyway).

Recommendation 28: Reform official Government cyber-security roles.

It is mandatory for many departments to have Information Technology Security Adviser staff (ITSA)[4]. Unfortunately, within the departments having the poorest cyber security practices, these roles are either unfilled, or have unsuitable personnel in them:

- All department ITSA roles should be made known to the public,
- all ITSA roles must be staffed,
- all ITSA staff must be properly qualified and those qualifications made public,
- unqualified persons should never be permitted to provide cyber advice – not to the department, and not to the public on behalf of the department either,
- all cyber advice provided to the department and the public be attributed: the large number of blatantly false security representations made by departments to Australians is disgusting, and in every case I find, advice is always anonymous, and every investigation I've made has lead to the department refusing to identify who supplied the advice. This reveals to me the fact that these departments almost certainly fully understand that their advice is false, thus refuse to identify the source as a result.
- ITSA staff be required to accept cyber-security and privacy reports and complaints directly from the public,
- Staff be compelled to act on all cyber reports within a reasonable and short timeframe,
- that all cyber reports received be published within a short and reasonable time frame after remediation, and always within 3 months of reception, whether or not remediated, or at least in compliance with best-practice global vulnerability reporting standards.
- no cyber reports be disregarded/hidden/ignored or otherwise not acted upon or reported.
- A rapid and functional process be implemented to remove dysfunctional ITSA role-holders.

Those sound obvious, but are almost entirely not taking place in the majority of government departments.

Recommendation 29: Mandatory cyber auditing (with no self-reporting).

Every department touching identity information should be required to undergo annual compliance auditing against all mandatory ISM controls, by a competent party not affiliated with the department, and be fully compliant with all

[4] See for example: https://www.dpc.sa.gov.au/__data/assets/pdf_file/0003/47442/ISMF-guideline-4b.pdf

strategies to mitigate cyber security incidents (not just the top-4, or essential-8, but all of them. https://acsc.gov.au/infosec/mitigationstrategies.htm).

All these audits must be published, a mechanism to receive public submissions objecting to misleading or false audit findings should be established, misleading auditors be banned from conducting further audits, and penalties need to be imposed for failure to comply.

Suggested penalties might include:

- Remove staff from roles
- Transfer of staff away from departments
- Demotion of staff
- Permanent prohibition of staff from holding any public service cyber roles in any departments
- Staff dismissal when deliberate misconduct is found (such as making false public statements about compliance)
- Mandatory destruction of identity information until such time as compliance can be adequately demonstrated

Recommendation 30: Prohibition on sharing identity information with non-compliant departments.

No identity information should ever be shared with any department that does not have a current and fully-passed cyber audit. Any reports to or by an ITSA providing evidence that any department is in breach of their security requirements should result in the immediate revocation of their compliance, and the immediate cessation of identity sharing, and destruction of identity information held by that department.

Recommendation 31: Repair cyber-response capability throughout government.

There urgently needs to be a non-government process or perhaps an open royal commission with strong powers and penalty tools to undertake a repair of the near-total lack of cyber security response capability throughout government – my work is just the tip of the iceberg; a more thorough process needs to be undertaken to find all the other problems which are being covered up, and to repair them all.

Recommendations relating to "Enterprise, innovation and cyber security".

Recommendation 32: Providers need to do more to protect users.

It is imperative that providers do more to protect users. It's not difficult, nor expensive, but they just don't. In my experience, the reasons they do not adequately secure their users include:

- Too much victim-blaming advice exists, giving them the impression that security for customers is not their responsibility.
- They do not have any formal requirements to protect their users; they have a duty to their shareholders, not their customers.

- Staff are usually more concerned with their own reputation, than security. They don't use new products that offer better protection, because they are too afraid to change.
- Sometimes they fear that user-experience might be negatively impacted, or customer on-boarding might be hampered. Neither of these are necessarily the case; and even the alternative – making best-practice security available but optional, is regularly refused.
- "Me too" mentality pollutes the industry – no matter how obviously poor solutions are failing to secure (eg. SMS for baking), and no matter how many experts explain how certain technologies are broadly useless, providers keep offering little or no or useless security solutions. For example – more than 15 years ago, Bruce Schneier, the world's most respected cyber professional, debunked the 2FA myth: https://www.schneier.com/blog/archives/2005/03/the_failure_of.html - yet today, this flawed and near useless idea from 1984 is almost exclusively the only "better security" anyone offers besides passwords.
- Common sense does not exist. Inexplicably, nobody seems to question bogus cyber advice, nobody bothers to test cyber claims, nobody pays attention to the causes of past cyber breakins, and nothing actually improves.

My recommendations (3, 4, 9 and 10) for action that government can take to solve this problem appear above.

My advice to Enterprise is for Management to take on high-level oversight of the cyber process. Security staff are simply not equipped to make security deployment decisions. They need to be told by their management what kinds of threats to protect against (such as: offer protection to their customers), because right now, cyber staff are refusing to do this.

Recommendation 33: Comment on equipping purchasers to protect themselves.

(Discussion paper page 11). A purchaser can never be adequately equipped to protect themselves. The nature of most modern threats makes the idea of such protection an architectural impossibility. The only feasible way to defend the vast majority of cyber-attacks is to introduce protection at the provider end. One of many examples - unless the provider offers a solution, there is simply no way an end user could use any other solution and be protected against provider-impersonation attacks – the root cause of most modern losses.

I disagree with many statements made on page 11. "Impairment of product operation" is an unlikely possibility – so remote it's possible that no such situation even exists at all. "Cost prohibition" is never a suitable excuse for insecurity – "cost" always refers to what a provider needs to expend to be secure, and never includes the losses or remediation costs a victims suffers as a result of that provider insecurity. If a vendor cannot cost-compete in a marketplace with a secure product, they should never be allowed to enter the marketplace with an insecure one as a compromise. That said – good security really is not expensive; vendors just need incentive to incorporate it. It is typically a small once-off development integration cost, and once deployed, usually remains in place for all the vendor products for the rest of time. "Accept the risk if they believe in the benefits" is not a sensible suggestion. Practically no customers will ever exist who fully comprehend the nature of cyber risks – what might seem a low-risk option to them, might well be the insertion point for malicious activity that has devastating consequences far beyond anything the customer could have imagined. In many situations these days, the purchaser of products is using those products to protect the information of their own customers. "Accepting the risk" is not a simple statement, because the "risk" applies not just to the purchaser, but extends to everyone who might be impacted by the security failure of the purchase.

Recommendation 34: Discard "minimising upfront costs for industry" wording.

(p. 12). Australians reported unrecovered losses exceeding $1bn over the last 2 years, and the total cost of cyber-crime is reportedly $29bn annually. It makes no sense to include language about minimising costs, particularly when the losses being suffered as a result of cyber-cost-avoidance is currently being borne by others (the users of industry services – not by industry itself).

Government exists principally to protect its citizens. Restrict your language to this purpose. Industry will deal with whatever costs are necessary, and always keep in mind that a "cost" to secure a business directly translates to "revenue" for a cyber security provider. This is a good thing: it provides employment, growth, improving protection, and new products and services to keep us even safer in future. Penny-pinching compromise and ineffective freeware junk-security are necessarily avoided if we genuinely seek long-term benefits for society

Industry money-saving at vast public expense is unacceptable.

Recommendation 35: Best practice Identity and Authentication must be made available to all.

The NIST SP-800-63 series (e.g. https://pages.nist.gov/800-63-3/sp800-63b.html) offers current best-practice guidelines on many effective cyber security techniques.

Enterprise needs to be compelled to make strong security at least an option that their discerning customers can adopt when they so wish – such as, for example, Authentication-Assurance-Level-3 (highest) protected logins.

Recommendation 36: Software goods must be digitally signed.

It is not expensive to get verified and buy code-signing certificates. Vendors need to be compelled to offer this protection when delivering software goods to Australian consumers. Without signatures, goods can be trojanised or substituted with malware, and/or customers be required to disable their security in order to use the product, greatly increasing their exposure to other security threats as a result.

Recommendation 37: Mandatory security update provision.

Companies that are failing to provide security updates (e.g. phone firmware, SIM card replacements, routers and modems, baby monitors, TV's and IoT devices, etc) should be charged a fine, and that fine spent on updating or replacing the insecure products. Australia passed a law letting us force anyone globally to reduce their security and insert back doors – a new law forcing the enhancement of security and the fixing of security problems is far less controversial!

Recommendation 38: Remove Digital-Identity-Services from Government.

Private industry, not government, should be tasked with the broadest possible set of roles and functions for digital-identity.

Government is un-trustable, unaccountable, beyond reach of laws and penalties, and has repeatedly proven incapable of implementing even the most basic of security protections for identity information (Case in point: the DTA's TDIF failed every single assessed criteria of its privacy impact statement).

Government are far more capable at compelling private industry to comply with laws and have penalties and protections in place to enforce them, and private industry are far more capable of being cyber-responsible than government, as well as more likely to be trusted. Take the TDIF away from DTA – the current (their 4th failed attempt) is a wreck again, and enough-is-enough!

Government also never commercialise their developments, and typically produce failures at vast public expense, and rarely if ever consider the broader application of their developments.

Digital identity is a global phenomenon, and every government in the world already readily adopts multiple industry developed solutions. The same is not true for any government-developed ones – many nations deeply distrust each other, and would never accept another nation's digital identity products.

The only feasible operator of a truly globally useful, truly privacy respectful, truly secure, digital identity solution is an industry solution.

Recommendations relating to "A trusted marketplace with skilled professionals".

Recommendation 39: Update your understanding of global industry standards.

"visible and trusted industry standards, do not yet exist in most cases." (page 13) – not true - AAL3 Authentication for example, the NIST sp800 suite, EPL-listing, OWASP, etc.

Recommendation 40: Trust.

The word "Trust" is frequently used in security, but is difficult to define or enforce, and is a huge and growing problem among vendors.

Many vendors lie, deceive, or twist truths, and most providers (including government) do **not** do what they say (they only pretend to be secure or care about security, when the truth is different - they do not care about the customer, they care about themselves (and shareholders) - if they care at all.)

Foreign cyber professionals tend to vastly exaggerate their credentials and experience, if not be outright deceiving in their CV's. This is common overseas practise. Australians are often the opposite – playing down their skills and experience (tall poppy avoidance).

It would be extremely helpful if a working definition of the many aspect of "trust" be developed, so when someone says something like "trusted market", everyone knows what exactly that is supposed to mean, who verifies that trust, who enforces compliance, who audits and certifies and ensures it's appropriate and deserved.

Recommendation 41: Update cyber training standards.

Some cyber training standards are woefully outdated (I quit my CISSP when many of their lessons I knew to be wrong, and I discovered they had no mechanism to correct them!). Many industry professionals know and understand which certifications and trainings are real, contemporary, and useful, and which are outdated or irrelevant.

It would be helpful if an authoritative review of materials and their associated mechanisms (if any) for corrections and updates be performed, and for "dud" material and training and update-mechanisms to be called out, for deficiencies to be corrected, and for quality advice informing everyone of the suitability of these standards be published. It's a good idea to train people, but a bad idea to train them with wrong information!

Recommendation 42: Buy instead of Build.

There needs to be more adoption of security technologies, and less hiring of professionals to re-invent the wheel – particularly in Government.

Recommendation 43: Mitigate the skills shortage by fixing some problems.

If better cyber products were deployed and used, and improved compliance existed, there would not be such a crushing need for more professionals.

The IMD World Digital Competitiveness rankings put Australia 53rd out of 63 countries ranked for its output of science graduates, and 44th for its digital technology skills. Under a subcategory for 'capital', Australia ranks 36th for "funding for technological development' and 34th for venture capital. This shockingly poor performance is unacceptable!

Recommendation 44: Penalties and liability enforcement.

There need to be more enforcement of laws, and more penalties legislated against providers who do not offer adequate security to Australians. The widespread practice of disclaiming all liability and responsibility in online "terms of services" etc needs to be overruled by legislation that makes it a legal obligation of providers to offer adequate security to Australians.

The internet is 30 years old now. The anarchistic "every man for himself" ways of old are no longer appropriate in today's openly hostile online environment. Providers need to be compelled to wake up and get secure.

Recommendation 45: Survey the Australian Cyber Security Market.

Find out who is in it and what products we make, and what services we offer. Find out how big we are, where we operate, and how well we are doing. Measure this periodically, so you can understand whether our market is growing or shrinking. Make knowledge of our solutions available throughout government, and BUY our products when appropriate. Recommend our solutions to other Australians when offering cyber advice.

Recommendation 46: Sponsor Australian products through EPL listing.

Out of 1400 global EPL-listed[5] cyber products, only 1 is from an Australian company! We make many of the world's leading solutions in cyber. Sponsor our assessment and inclusion in this globally-accepted standard for high-quality cyber products.

Recommendations relating to "A hostile environment for malicious cyber actors".

Recommendation 47: Block threats first.

See recommendation #7 – get rid of all the confusing dozens of cyber reporting entities – re-deploy all those duplicitous staff on prevention and take-down duties.

Recommendation 48: Prioritize prevention.

There is VASTLY too much focus on detection, deterrence, and response (indeed – page 8 – does not even list prevention whatsoever!) – we need to get our priorities right:

Prevention is better than cure!

Ensure that Prevention always comes first in all cyber advice and initiatives.

Recommendation 49: No expanded law capability is needed.

We already have adequate laws, but these existing capabilities' are simply not used right now (and are mostly unreachable)

Drop the idea of expanded powers, and invest in encouraging existing powers to actually be used (see recommendation #7 – amalgamate the duplicity)

Recommendation 50: Properly designed digital identity promises to all but eradicate online crime.

The world still needs a working, privacy-respectful, digital identity infrastructure. Experts and industry need to be engaged to design and build this.

With strong working Identity, almost all online crime (and a lot of offline crime too) is eliminated.

Nearly all crime depends on the perpetrator's identity being hidden. A working global digital identity solution would help prevent unacceptable anonymity, making scams inoperable, making malware almost impossible, identifying hackers and terrorists, and defeating almost all forms of fraud. Modern cryptographic solutions exist to make this strongly privacy-preserving and highly secure. Tech exists so can prove "you are you" without anyone knowing who you are or tracking you, while still (and only when necessity permits) facilitating your actual identification in emergency or terror situations.

[5] See https://www.cyber.gov.au/publications/evaluated-products-list

These solutions need to be made available by industry, and consumed and championed by government, and in so doing, promise to almost entirely eliminate global fraud and cyber-crime in the process.

Recommendation 51: Cyber-insecurity levy.

A levy or per-customer tax or other kind of "mitigation fee", charged to all companies providing inadequately-secure services (e.g. no AAL3) to Australians needs to be imposed. Presently, online providers are not obliged to protect their customers. This is a big problem, since they are the only ones in the position to offer adequate protection. A fee charged against them would provide the missing incentive they need to offer that security, as well as revenue that could be spent helping any less capable ones to achieve compliance.

Recommendation 52: Penalties imposed on attack supporters.

Australian operators and foreign operators with Australian presence, who support attacker infrastructure (e.g. Amazon hosted penetration scanners, Go Daddy-registered websites hosting unauthorised vulnerability exposures, ISP's facilitating DDoS attacks, VPN providers refusing to identify fraudsters, etc) should be required to receive attack reports from victims, and to expediently remove the attack, identify the perpetrator, or destroy the offending infrastructure. Those operators should be handed heavy fines for non-compliance or unnecessarily delayed response.

Presently, there are little to no disincentives for operators to take any action against attackers, and in my long history of attempting to take down more than 100 different kinds of attacks and frauds around Australia and the world, the #1 response I receive on practically every occasion is "Sorry, we can't do anything because of customer privacy". Their public response is to protect the privacy of the criminal and allow the attack to continue, instead of curbing the damage that their systems are permitting. Attacks rage on with the full knowledge of the operator facilitating them in the vast majority of the large number of situations I have first-hand experience of.

Recommendations relating to "A cyber-aware community".

Recommendation 53: Totally discontinue your blame-the-victim approach.

The entirety of your "cyber aware community" discussion paper section is blatantly offensive. This is completely the wrong approach.

It is obvious beyond any doubt that the idea of expecting millions of ordinary Australians to all become cyber experts is completely ridiculous. Your page 17 lists a panel of 4 insulting statements ridiculing everyday people for not doing or knowing something that should never be their responsibility in the first place.

There is NO POSSIBLE WAY that any initiative to "help people secure themselves" can succeed. You can never reach them all with any message. You can never design any message that could be suitably understood. The vastness of the problem makes it impossible to educate them properly. They could never possibly remember it all even if you tried. And , worst of all, there is NOTHING THEY CAN DO that could generally be considered "effective" against any modern sophisticated adversary anyhow – you cannot educate them, because they simply do not have the opportunity to secure themselves. It is a cyber-architectural impossibility.

The ONLY way that Australians can be secured, is when adequate security is adopted and offered to us by the providers of the products and services we use.

The entirety of this "cyber-aware community" messaging needs to be flipped on its head – and converted into a campaign to educate the people in a position to protect us (providers), so they know they can and should, because it is ONLY they who can.

Refer to my recommendation #3 for more details.

Recommendations relating to "Other issues".

Recommendation 54: Discontinue behaviour-change campaigns.

As above (53) and recommendation 3:

"best practice behaviour change campaigns" (p.17) – is the wrong approach. Stop blaming the victims – it is not their fault, and they are not in any position to fix it.

A note about insurance.

Insurance is not doing what you think.

Cyber-insurance is providing a mechanism to industry for the cover-up of cyber reporting. It facilitates the transfer of intrusion costs in accounting systems to conceal the extent of breaches and serves to keep shareholders in the dark regarding inadequate company cyber protection.

Insurance provides a safety-net which makes it "OK" for companies to remain insecure. Safe in the knowledge that their costs will be covered, they are free to avoid the now unnecessary expenditure on adequate protective solutions.

Insurance worsens the outcomes for customers and end users. The role of an insurance company, same as any, is profit for shareholders. The most effective cost-reduction method for insurance is to shift losses to other parties, which in the case of cyber attacks, means away from themselves and who they insure, and on to the victims. The presence of cyber-insurance is exacerbating user losses – contributing to increasingly oppressive language in terms, to increasingly ruthless refusals to compensate for losses, and to reduced transparency.

A note about Telstra.

Telephone scams are a vicious contributor to Australian cyber and fraud losses. I personally receive frequent scam calls, and I personally know many elderly (and other!) victims who have suffered huge and un-recovered losses. I frequently make attempts to get Telstra to take-down offending infrastructure, and to install spoofing protection that prevents imposter message-ID transmissions, and to disconnect or blacklist the incoming overseas infrastructure responsible for these calls. In every one of my many and long attempts, I have been met at every turn by ruthlessly obstructive behaviour from both Indian and on-shore Telstra staff, and abject refusals to take any action.

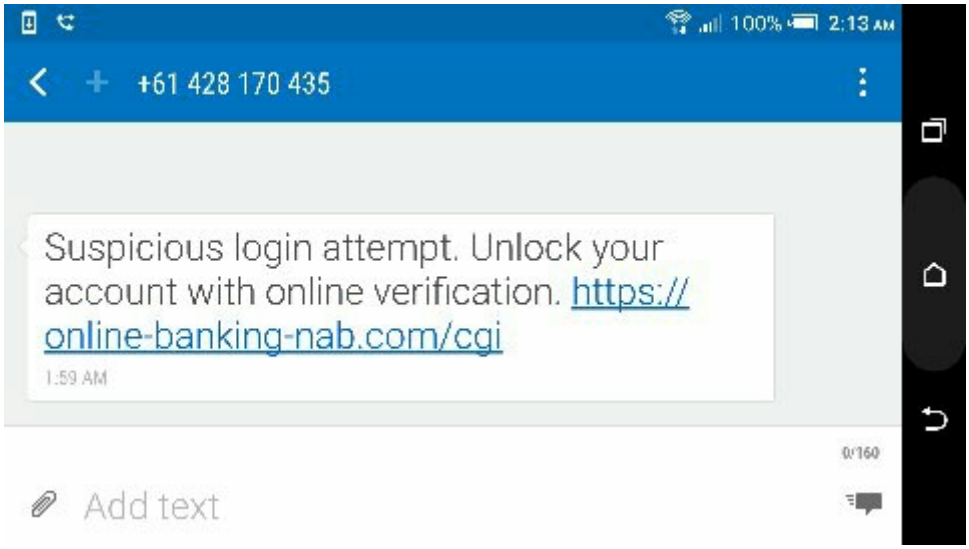
The sheer callous refusal to take any action to curb the staggering losses that their inaction facilitates beggars belief.

Urgent action is needed to punish Telstra (and maybe others – I've not looked at the others) for the losses that their tolerance of these scams is causing.

One suggested punishment is to enforce a deadline by which they must demonstrate a working and rapid response to all scam call reports, and to cover the cost of any and all infrastructure spending necessary to make that possible, with significant financial penalties for non-compliance, for lateness, and for operational failures, with the obligation to repay losses incurred by subsequent victims should Telstra fail to timely take action to prevent repeat offenders.

It is in the Telco power to end this scourge, and they are showing no signs whatsoever of voluntarily doing so. It Is long past due that they be compelled into responsibility.

Update – within an hour of writing the above, I received the following phishing broadcast, sent my SMS Text message, a Telstra mobile subscriber number. Earlier today, I spent an hour on the phone to Telstra support pleading for them to take down a voice phishing caller who also called me. The operator admits that they receive huge volumes of complaints about this same issue, but point-blank refused to do anything, refused to escalate my complaint, refused to take the details, refused to identify his manager or any other more senior staff, and supplied bogus technical information relating to how Calling-Line-Identification technology works (I questioned him after his fake excuse, upon which he then admitted he has no idea whatsoever of how that technology works). This strongly suggests that Telstra staff have been directed to lie to customers about fraud issues, and to put forward false-impressions that they cannot do anything, using fake technical pretences.



(Yes, I was up past 2am working on this submission)

Chris Drake's Comments relating to Australia's Cyber-Security Strategy 2016 & 2020.

Our 2016 policy, its update, and the 2019 "Call for Views" contained alleged and encouraging "progress" and other statements, but overlooked including all the failures.

In my experience, this is a common theme in Government publications:-

- There is little or no examination of failure.
- This is far too much spin doctoring of alleged "achievement", and most cyber-security rhetoric (especially government) bears little resemblance to actual reality.
- Measurement is not taking place, or is being suppressed/classified. When no empirical study of the efficacy of actions is done, nobody can possibly know if their actions are working!

My observation of failures from the 2016 strategy:-

I should not have had to do this – your discussion paper should have included all failures AS WELL as the alleged successes. Not knowing that it failed is itself a fail (failure to measure).

Page 3:-
"this Strategy will help bring more Australian technologies to market" – did it? Can I see the list?

"boosting STEM participation" – did it? Are there numbers? My google search today shows no fix.

"support and create innovative Australian companies." – how was this done? Where is the list of who benefited?

"The Government will show leadership" – where are the statistics measuring government cyber incidents?

ACSC – "will ensure cyber security is given the attention it requires" – is there a report? What incidents did they attend? How many departments comply? Why do they never reply to incident reports unless threatened with FoI? Why are inquiry submission suppressed? Why are cyber reports classified?

"This strategy will develop partnerships between the Australian public and private sectors" – did it? With whom?

"… support home-grown cyber security capabilities" – did it? Which ones?

"We will change and adapt when needed" – have you? In what areas? Who decides "when needed"? What percentage of Government departments fully comply with the ISM and all ASD mitigation strategies? Who is auditing government self-reporting of compliance? Who is being disciplined for misrepresenting compliance?

"I look forward to working with [..] the private sector" – did he? Who? All my approaches were rejected.

Page 2:-
"While governments can take the lead in facilitating innovation and providing security". What innovation has it facilitated? What security has it provided? N.B. Advice is not security, especially when efficacy is unmeasured.

"The rate of compromise is increasing and the methods used by malicious actors are rapidly evolving". True and true; unfortunately, security adaptation is not happening: adoption of evolved security is not taking place, and far too much effort is going into cover-ups, victim-blaming and fake security statements instead of revealing the increasing failures.

Page 4:-

"We must embrace disruptive technologies;" which new cyber ones has Government "embraced" since 2016?

"the Australian Cyber Security Centre has lifted Government capabilities to a new level" – this, in my extensive experience, is untrue. Govt cyber capability is almost non-existent in the half-dozen departments I've tried to reform over the last 4+ years.

"banks and telecommunications companies, have strong cyber security capabilities" – not true in my vast experience, plus, what "capabilities" they have are targeted at protecting themselves, NOT their customers. This is not my opinion, it is my observation, plus it is stated company policy from multiple banks I've spoken with.

Page 5:-

"The Australian Government will take a lead role". Who lead this? With whom were partnerships forged?

"Australia's cyberspace must also be a shared responsibility. It will be important that businesses … work with governments … to improve our cyber defences and create solutions to shared problems". Yes, very important, but HOW do we do this? Cyber-procurement is a total shambles, "build instead of buy" rules all major projects, and there seems to be no genuine consideration of "value for money". Vendors should not have to know who in government needs their products - *Government* should know they need them (e.g. because it's in the ISM or "Essential 8" etc), and they should seek out Australain vendors to buy from.

"Strategy's initiatives will be reviewed and updated annually and the Strategy reviewed and updated every four years." – was it? Who lead the reviews? Where can I read them? What was measured? Why was I not invited to help? Where are the updates?

"[Actions]will be co-designed with stakeholders from the private sector" – which ones were? Who from the private sector was involved? Why not me?

"Many of these actions also rely on working with all Australians—because we all have a part to play" – WRONG WRONG WRONG. This is the most annoyingly misguided advice that keeps rearing its ugly head time and again. Good Cyber Security is EXTREMELY COMPLICATED, and the vast majority of opportunities to protect everyone lay NOT with the end users, but with their providers. Telling everyone, end-users and providers alike, that it's the role of the end-user to be safe, is educating the providers that it's OK to keep blaming the victims, even when the providers don't give those victims adequate security in the first place. **Individuals need to be protected**. It is blatantly irrational to hope that *24.6 million* Australians can all become cyber experts to keep themselves safe. If any of them "have a role to play", the only reason is because someone did not give them adequate protection in the first place. If you don't know what that protection is – there is a major failure in your cyber strategy: it should NOT be the Job of a solution vendor to educate the market, least of all the government, and not at all any government purporting to provide cyber-education. That Government should know what's out there to solve critical problems, especially when it's Australian-Made, it should be using this itself already, and it should be promoting it, or even mandating it, to every provider who has Australian customers.

"This Strategy charts a new way forward for Australia's cyber future, one that is creative, collaborative and adaptable." – there is still too little collaboration, and what exists is far too one-sided (and sometime not even genuine), most severely lack transparency, and are immune to correction when wrong.

Page 6:-

"Cyber Partnership" – ministers are almost entirely unavailable, and do nothing to help in cyber situations. They do not appear to read (or maybe receive) my senate-inquiry submissions. They don't return my emails or phone calls. Our voice in meetings does not seem to make any difference, and I am not invited to most meetings in the first place.

“We will also sponsor research to better understand the costs of malicious cyber activity” - This needs involvement of a statistician, and to get rid of the time-wasting burden placed on victims. “Doing nothing” when a victim reaches out for help, other than wasting an hour of their time collecting statistics that will never be acted upon is disgraceful.

“We will better **detect, deter and respond** to cyber security threats” – nice, but, this is missing the MOST important part: “PREVENT”. In my vast experience, there is also little to no “respond” taking place either.

“Australian governments and the private sector will work together to share more information” – this is broken. I’ve been *repeatedly* blocked, as have others under the excuse “vendors might obtain commercial advantage”. We make the products that keep you safe. Excluding us when you’re under attack is plain crazy.

“streamline the cyber security governance for Commonwealth Government agencies and clearly identify lead responsibilities.” – in my **vast** experience to-date, this is absolutely not happening. Australian government rhetoric surrounding cyber-security practices and the handling of citizen identity information bears almost no relation whatsoever to actual department practices. Rules are almost never followed, security issues are practically never addressed, failures are covered up, inquiries are misled, and there exist no working mechanisms to correct mistakes or fix security problems. Citizens are fed blatantly false assurances regarding the cyber security posture of government departments, usually from anonymous and unskilled sources, who refuse to be identified when challenged. There are no penalties for ignoring the rules, Departments routinely refuse to correct cyber issues, and cyber testing is rare and usually fails. In the comfort of anonymous or private forums, many government cyber professionals express these same opinions, along with their frustration at not being able to compel departments to change.

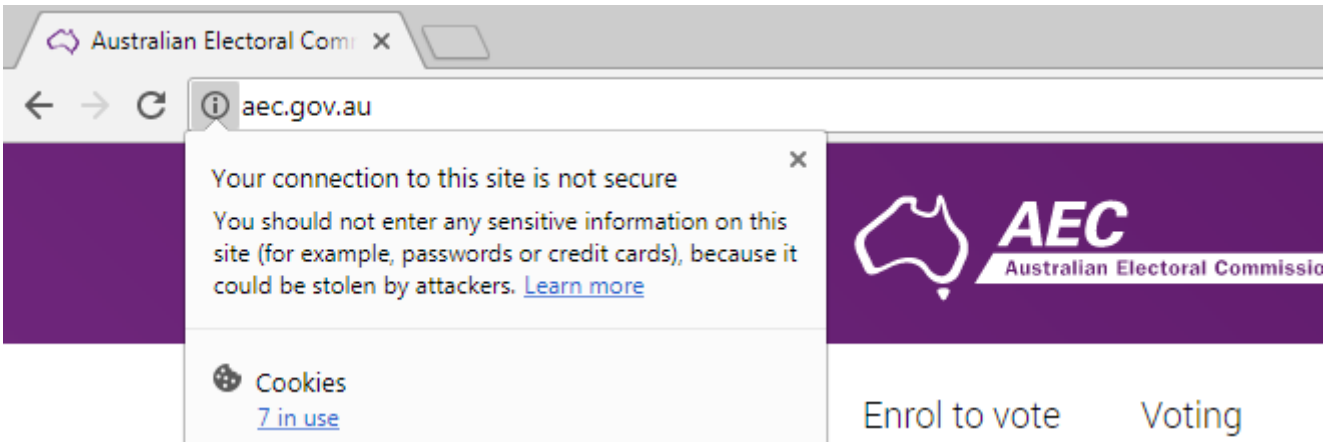
- Every department I’ve contacted (AEC, DHS, ABS, ASD, former DTA, PM&C, AUSTRAC, Defence, ACSC, plus some state and local governments, and others I’ve forgotten), no exceptions, point-blank refuses to fix any of the large number of cyber security and privacy issues I’ve brought to their attention.
- Almost every department claims that they have no security problems (despite **evidence** to the contrary that I supply).
- All department claims of "we have no security problem" are unsigned, unattributed, and obviously not from any security professionals.
- All departments routinely block every cyber-security-related FoI request I make (all relate to cyber failures).
- Departments censor (remove) all controversial public comments that are made on systems they control, especially ones relating to cyber security.
- No departments I’ve found appear to have any actual ITSA or similar (supposedly mandatory) roles with staff actually in them (I did notice an advert appeared seeking to fill one of those roles after I began applying pressure - so perhaps I made one tiny bit of difference to one department there).
- Departments all refuse to identify any of their IT security staff - they refuse to name names, they refuse to provide contact details. My conclusion: they do not have staff in these roles.
- The OAIC FoI review process is a sham (backlog of 1+ years, and no power to right wrongly refused FoI reports anyhow).
- There appears to be a highly organised FoI "officer" scheme or training in place to block every request that might embarrass government from being honoured (despite the law clearly banning that behaviour).
- "Consumer Protection" laws do not apply to government: when government break them, all action I've taken to right those wrongs has resulted in department lawyers telling me the sections of legislation that make them exempt.
- All senate inquiry reports I file that embarrass government become deemed "confidential": this is a way to hide the content AND EXISTENCE of these reports from everyone - they are removed from the record, they are never available to anyone. From observation of inquiry broadcasts over the internet, senators appear not to be provided with these reports (or at the very least -they do not read them).
- Every inquiry senator I contacted failed to confirm they ever read or received my submissions.
- I never get invited to participate in anything I apply for (to give evidence at inquiries, or to participate in reporting).
- As best I can tell - all inquiry and report-writing that takes place is not genuine. This includes the PM advisory panels I did manage to be on. They have an agenda "get some law or other passed", and industry

involvement in the process is a sham - simply so government can pretend they consulted before they did what they already have planned. Our recommendations do not get considered.

- Some departments providing security advice to citizens source dubious content from the internet to base their advice on, and then refuse to be corrected when they're wrong, refuse to acknowledge evidence proving them wrong, refuse to study the efficacy or suitability of their advice, censor criticism about their flawed advice, refuse to publish corrected advice, and continue repeating their advice despite the volume of material weighing against them.
- Most departments actively mislead the public about their security and privacy practices – for example – the DTA web site in relation to the TDIF, under the heading "How we protect your privacy", linked to a privacy impact assessment (PIA) document – giving the false impression that this document proved that the DTA protected privacy, when in reality, inside the PIA details it actually reported that the DTA **failed every single privacy control that was tested**.
- Australia Post, a government-owned "body corporate" existing through specific government acts, is considered a "commercial entity", and thus it is allowed to escape FoI scrutiny.
- The Australian Signals Directorate (ASD) – our peak body informing all other departments on the topic of cyber security, is immune to FoI scrutiny too.
- Public servants are highly misleading when appearing in senate inquiries: they fail to report their own mistakes, and they readily point to industry failures as a means to divert attention from their own mistakes, and some departments cover up the failures of other departments when questioned by senators (e.g. The ASD head, when asked in the government-service-failure inquiry if a department was compliant with ASD advice, chose a lengthy reply summarising ASD advice as his tactic to avoid answering the question, which worked).
- The way the privacy law is written gives all departments a "get out of jail free" excuse not to fix security problems: the ASD (who provide security advice, including the operation/oversight of so-called "approved" secure cloud etc) is not the same department as the ones *with* the privacy data, so no single department has security responsibility over this data, so no department is ever in breach when it's insecure.

A. Australian Government systems are utterly insecure (this is a well-reported fact - 62% of Australian cyber break-ins are to Government servers. That's 4 new ones every day. Sources: Australian Signals Directorate "Cyber Picture 2013" and DPM&C Strategy page 16:
B. There is no working mechanism to fix it.
C. There is no motivation to fix either of the above.
D. Senate inquiries pertaining to government failures are 100% whitewash - public servants totally control these, and they do not allow exposure of embarrassment.
E. Reviews and inquiries never seem genuine, and always exclude me and the submissions I make - uncovering public service failure appears never to be acceptable in final reports.
F. Nobody in the public service seems accountable - there are no penalties for doing the wrong thing.
G. The system in place to cover all that up is well oiled.

I have hundreds of documents verifying all my above claims which contain even greater numbers of embarrassing problems that the few above that I've recalled.



Here's how ASD lawyers responded to me when I submitted a privacy complaint regarding **their "security"-approved systems** being implemented with no security whatsoever to collect voter enrolment details.

> " As the ASD does not have possession or control of a record containing your personal information collected by the AEC, my initial view is that the ASD is not required to take reasonable steps to protect the security of such information. "

That bears repeating in bold!

> The ASD is not required to take reasonable steps to protect the security of [voter] information.

Official legal (written) public position,
– Australian Signals Directorate (our peak official body responsible for cyber security in government)

Here is an excerpt from the "First Annual Update" to our Cyber Security Strategy that came out at the very same time that the ASD and the AEC were point-blank refusing to switch on security for Australian Voters and their enrolments:-

Australia's Cyber Security Strategy: 2017 Update

ISBN 978-1-925362-45-9 Australia's Cyber Security Strategy: 2017 Update (PDF)

US ELECTION INTERFERENCE

The hack and release of sensitive information from the US Democratic National Committee by Russian cyber actors in the lead up to the 2016 US Presidential election demonstrated how targeted disclosures of stolen information can interfere with processes underpinning Western democracy. The interference broke new ground for unacceptable behaviour and tested concepts around public attribution, response and effective deterrence. It also encouraged discussion over the security of electoral systems, including on-line voting.

Commonwealth of Australia, Department of the Prime Minister and Cabinet, Australia's Cyber Security Strategy: 2017 Update

This is a situation that repeats over and over and over. Government rhetoric tells absolutely false information about their actual cyber security practices, which in my vast experience are embarrassingly obviously beyond repair, even when the headlines are awash with examples of the problem.

Page 7:-

"co-design national voluntary cyber security guidelines" – these are outdated, with wrong information. They probably need to include recommendations to products and vendors to make these guidelines actually work (there is no point telling people to be secure, if you do not tell them how!).

"shut down safe havens for cyber criminals." - How many attacks reported by Australian personal (non govt, non business) Victims got shut down through these mechanisms? Is there a list of the attacks reported (e.g. phone scams, ebay fraud, ransomware, etc). Every attempt I've made to shut down scams and frauds has met with no success, and I've tried *hard*. I've worked with the FBI on USA fraud, and they got results (arrest, extradition, and 37 years imprisonment of the offending cyber-crime gang). Why can't we?

Page 8:-

"the Government will also support Australia's cyber security sector to expand and promote their capabilities to the global market." - Did it? Can the Government supply a list of who is in this sector, and what they do? Trick question: I know they cannot. I've never been surveyed for example... Who, if anyone, in my industry benefitted from this? Where was the promotion done? Why has nobody in my government ever contacted me for either my advice, or to use my products? How many other Australian Vendors have also never heard from anyone in our government who needs their solutions? With no exception, every successful Australian Cyber business I've asked (a lot) has said they owe their success to leaving Australia and selling overseas.

"With better focussed cyber security research and development" – we do not need more research – we need commercialisation; almost everything you need already exists in Australia – what is needed, is for Government to USE IT.

"Cyber Security Growth Centre" – major failure. They have never even surveyed our industry – they're supposed to grow us, but have no idea who we are or what we do or how big the industry is, no regard for the size of our country or where vendors are located or the costs to vendors trying to use their services.

"particular focus on support for cyber security start-ups" – which ones? What support did they receive? How many government departments are now buying products from those start-ups? If none, why not?

Page 9:-

"The Government will also further improve national cyber security awareness and work to ensure all Australians understand the risks" – WRONG WRONG WRONG – see my explanation earlier (Recommendation 3).

I invite you to peruse some of the following public submissions I have made to assorted government inquiries and reviews. Every one of these has been "suppressed", along with the records of me making these submissions.

Attachment 1: Submission to the Senate Inquiry into the Digital delivery of government services.

The Department of Home Affairs removed pages 36-96 as they contain information deemed confidential by the Senate Standing Committees on Economics and the Senate Standing Committees on Finance and Public Administration.

About Chris Drake

Foreword: Australians suffer a cultural affliction known as “tall poppy syndrome”. It is in our nature to despise, criticize, cut-down, and distrust high-achievers and public figures. Please be aware that you’re in Australia, and probably you are Australian, and are yourself almost certainly so afflicted. If, while reading this, you find yourself critical of my motives, hating my words, or thinking anything about “Chris Drake” – please STOP – take a breath, and try to return to the topic. This is about Cyber-Security – not about “Chris Drake”. If you’re thinking I’m arrogant already – perhaps take a break right now! Disrupting “tall poppy” is an important step to securing Australia!

- I'm a veteran cyber expert with 37+ year’s continuous experience. I’m trying to fix Australian cyber-insecurity.
- I'm a graduate from the **excellent** Israeli Landing-Pad Program by Austrade.
- I’m a Microsoft-Ventures cyber graduate (India) and an Advance.org cyber graduate (San Francisco)
- My cyber-security company has raised more than $1M through several federal Government grants.
- I was on the PM's cyber panel. I've been part of two cyber advisory committees (e.g. network threat blocking).
- I've participated in 3 senate inquiries relating to cyber.
- I’ve been involved in numerous QLD state-Government innovation initiatives, attended many QLD events,
- I've made use on more than 100 occasions of cyber vulnerability reporting mechanisms throughout Australia.
- I've personally met ASD staff several times, and spoken at and attended private lectures they've given.
- I've made extensive use of FoI-Act requests relating to cyber security issues, and filed one Privacy-Breach notice.
- I've reported more than 3 critical government vulnerabilities in the last 3 years.
- I've worked with the AFP and FBI for many years, and testified in Cleveland putting BayRob in jail for 37 years.
- I wrote the penetration-testing guide of our Trusted-Digital-Identity-Framework, TDIF (under contract to DTA).
- I'm a vocal AIIA member in cyber advocacy groups, and regular attendee at cyber forums and events.
- My company and I have won more than a dozen prestigious international awards relating to cyber security.
- I own many patents, including the worlds #1-cited security patent of all time (authentication & anti-malware)
- I’ve worked in Anti-Virus research at IBM. I’m in the partner programs of Microsoft, Checkpoint, IBM, and others.
- I’ve personally hand-coded 3 cipher algorithms under contract to the Australian Air Force.
- I’ve taken one of my products through the ASD (formerly DSD at the time) cyber evaluation process.
- I am a USA-accredited digital identity registrar and run a secure online identity service
- I’m an AUSTRAC-registered digital currency exchange, participated in their training, and got audited
- I helped write the OpenID, OWASP, and FIDO standards, and some of the NIST sp800 series.
- I’ve submitted several cyber-bugs to international bounty programs and reporting systems.
- I’ve had meetings of 1+ hours each with more than 500 cyber experts in 200+ different global organisations.
- I’m a member of a dozen cyber working groups. I’ve won several state and national GovHack awards.
- I’ve spoken at about 50 local and international cyber events, and attended many more.
- I’ve sued and successfully defended cyber patent and trademark lawsuits in the USA
- I own and operate an Australian cyber business in the field of secure authentication.
- Cyber-security in Australia is a shambles, and I genuinely want to try and help fix it.

Most of my submission is not my opinion – it is fact which I can support with extensive evidence.

There is no substitute for experience. Anyone who hasn’t lodged a vulnerability report, participated in an inquiry, filed an FoI, used a cyber service, joined a cyber group, lodged a cyber tender, built a standard, been at a working group, sold a cyber product, run a cyber business, tested an assumption, etc – is not truly qualified to comment on the related topic. I’ve done all those things, usually many times, recently.