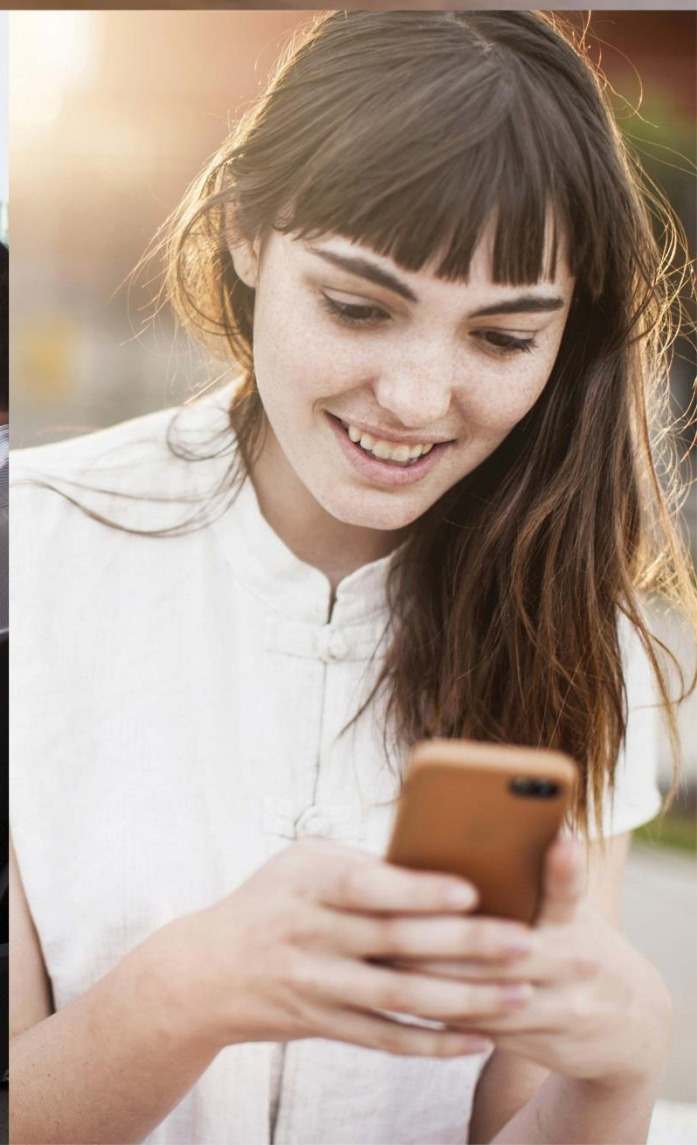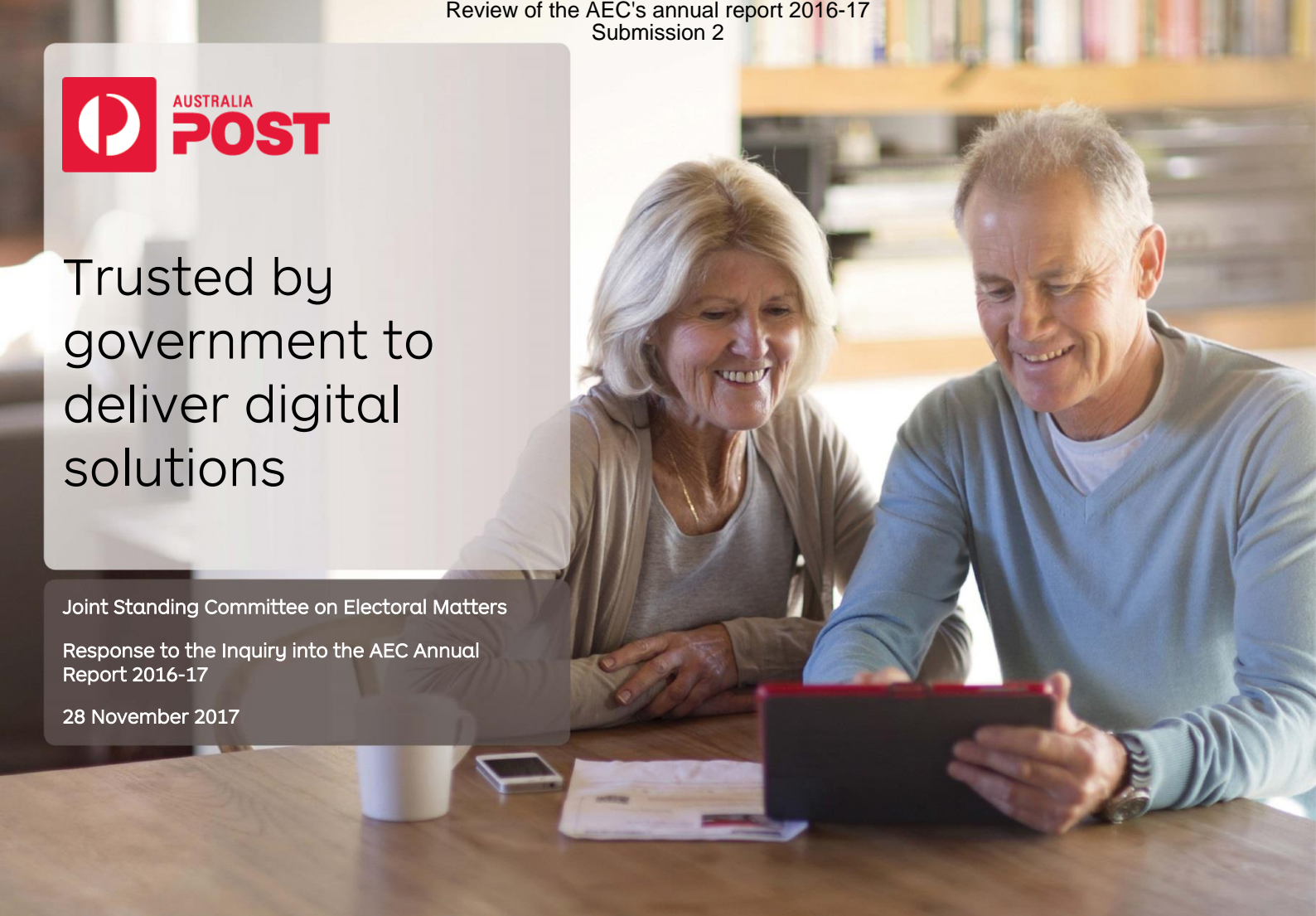**AUSTRALIA POST**

Trusted by government to deliver digital solutions

Joint Standing Committee on Electoral Matters

Response to the Inquiry into the AEC Annual Report 2016-17

28 November 2017

AUSTRALIA POST

Standards based approach

Internet voting standards

It is imperative that State and Federal electoral commissions clearly set out standards that they require to be met in the development of internet voting solutions.

Clear standards are required to help Australians realise the benefits created through the adoption of internet voting offerings, especially for remote and absentee or overseas voters.

Australia Post believes that the endorsement of 11 essential principles for an internet voting service by the Electoral Council of Australia and New Zealand (ECANZ) provides the essential foundational guidance to potential internet voting providers in the development of solutions that will be acceptable for supporting elections in Australia.

Based on the council of Europe's Committee of Ministers to member States on standards for internet voting CM/Rec(2017)5 and the 18 principles detailed in the US Election Assistance Commission's draft Voluntary Voting System Guidelines (VVSG 2.0), the ECANZ 11 Principles are the first step in a definitive leadership position being adopted by the combined governments.

Case Study – Electronic Voting standards in Switzerland

Switzerland is a federal state comprising three levels – confederation, cantons and communes. Direct democracy means that there are a multitude of electoral events conducted each year: up to six election periods for each of the 26 cantons can be expected.

In 2013 the Swiss Federal Chancellery developed a set of standards covering the use of internet voting to be used in cantons. As part of the standards, the higher the proportion of eligible voters using internet voting in a particular region, the stricter the technical, security, verification and certification requirements become:

- Up to 30% of eligible voters: the internet voting system must satisfy a list of technical and security requirements
- From 30% to 50% of eligible voters: as above, and in addition the hosting must be ISO 27001 certified and the platform certified according to the requirements of the law. Voter verification requirements are also more stringent.
- Above 50% of eligible voters; as above, and in addition the system has to implement universal verifiability, implement end-to-end encryption and have control components that are independent from each other

These requirements of the law influence both the software aspects (including the cryptographic protocol) and infrastructure and operational aspects of the platform. Cantons are responsible for deciding if and how they wish to introduce internet voting and choose their provider, but have to do so in accordance with federal law.

Swiss Post

In 2015 Swiss Post started developing a platform for internet voting which it offers to cantons and municipalities for use by citizens living in Switzerland or abroad. As a trusted carrier of 20 million consignments containing voting documents and postal votes every year, Swiss Post is also the natural choice for ensuring the safe and confidential transmission of votes cast electronically with its internet voting solution. This solution has been in use since 2016 and is currently used by two cantons, with two more commencing shortly.

References

Federal Chancellery Ordinance on Electronic Voting (VEIeS), Swiss Federal Chancellery, (2013)
https://www.bk.admin.ch/themen/pore/evoting/07979/index.html?lang=en&download=NHzLpZeg7t,lnp6I0NTU042l2Z6ln1ad1IZn4Z2qZpnO2Yuq2Z6gpJCIdIR7e2ym162epYbg2c_JjKbNoKSn6A--

Technical and administrative requirements for electronic vote casting, Swiss Federal Chancellery, (2013)
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Swiss Post eVoting Solution, Swiss Post (2017) https://www.post.ch/en/business/a-z-of-subjects/industry-solutions/swiss-post-e-voting

RECOMMENDATION: Specific detailed standards should be endorsed at a Federal level that cover internet voting use. This will enable States and Territories to conduct internet voting trials that would meet the appropriate security and protocol requirements and enable providers to develop solutions that comply with the standards.

Voter Authentication

A critical element of any internet voting solution is the principle of one voter, one vote and to ensure that the person voting online is the person they are claiming to be.

The Attorney-General's Department identity security guidelines and standards are relevant in this instance. The "National Identity Proofing Guidelines" https://www.ag.gov.au/RightsAndProtections/IdentitySecurity/Pages/Identity-security-guidelines-and-standards.aspx lay out four levels of assurance (LoA) in a person's claimed identity.

Recently the Digital Transformation Agency (the DTA) has released for public review an initial tranche of 14 related documents as part of their "Trusted Digital Identity Framework": https://engage.digital.gov.au/trusted-digital-identity-framework-consultation

The DTA standard defines what constitutes a "Level 3 assurance" in a digital identity context. This consists of a 'commencement document' (such as a birth certificate, or original immigration entrance documents), a photo 'binding document', and a proof of 'operating in the community' (such as a Medicare card, or a record of transactions with a bank or a history of postal deliveries).

A Level 3 digital identity check is the modern equivalent of a "100 point check with photo ID".

RECOMMENDATION: when verifying a claimed identity for the purposes of internet voting, a Level 3 (silver) should be required as a minimum standard.

Case Study – Digital iD™

Australia Post have developed a consumer-facing identity verification solution, called Digital iD™.

For over 200 years, Australians have been trusting Australia Post to securely deliver the sensitive information their letters and parcels contain. We also conduct over 6 million identity checks each year through our post office network.

With Digital iD™, Australia Post offers a secure digital alternative to prove your identity and manage your personal information, across channels and across Government and business.

Often when asked to provide personal details, you end up sharing more information than is necessary, but with Digital iD™, you decide what information to share, and with whom to share it.

Leading encryption technology securely guards your personal data, and the app's PIN or Touch ID protection ensures that your data stays safe even if your phone is lost or stolen.

Digital iD™ takes the repetition out of verifying your identity. Once you've been verified, it will be fast and easy to prove who you are when you need to again.

Fast Facts

Australia Post's Digital iD™ identity verification solution:

- allows individuals to verify their information once and then easily prove who they are online and in person through the smartphone app;
- gives users full control of what personal and identity details they share, when and with whom; and
- offers the digital equivalent of over-the-counter verification elements at the same time as providing security and privacy.

Privacy Protection

Australian citizens and permanent residents retain the right, enshrined in Australian privacy legislation, to act anonymously or pseudonymously when interacting with Governments or businesses, unless:

(a) an organisation is required or authorised under Australian law to request identification; or

(b) it is otherwise impracticable to deal with individuals who have not identified themselves.

There is currently no requirement under law for voters to produce proof of identity at the time of voting, however in order to deliver a secure internet voting service this may not be practical when applied to internet voting.

RECOMMENDATION: Voters will need to identify themselves to confirm eligibility to vote if they wish to use internet voting services. Standards need to be specified to ensure that once a voter is identified, their identity is not linked to voter ballots in any way that would compromise anonymity.

Cybersecurity

Implementing Cybersecurity as a control function within a solution is no longer sufficient to protect against the current and emerging potential threat actors and vectors.

The concept of Digital Resilience, is a holistic approach that drives an attitude to cybersecurity as a paramount concern throughout the entire lifecycle of a system from solution design, implementation and into operations. Digital Resilience integrates the technology architectures, cybersecurity controls and business processes into a complete cybersecurity defence approach that is tailored to protect the information assets of the internet voting solution.

It is imperative that any internet voting solution developed for elections in Australia has a high degree of digital resilience designed into the solution at every level to ensure that the risk of a successful cyber-attack is minimised and citizens are able to have a high level of trust in the system when they go to cast their vote.

The Australian Signals Directorate (ASD) produces the Australian Government Information Security Manual (ISM). The manual is the standard which governs the security of government ICT systems, and complements the Protective Security Policy Framework. Any internet voting system should comply with the ISM principles. No further specific standards are required.

Conclusion

Australia Post believe that the development of a standards framework for internet voting covering all levels of government would provide the direction required for industry to develop solutions that can be implemented to provide secure internet voting systems that will maintain public trust in the electoral voting process, including the results.

The 11 Principles developed by ECANZ should be endorsed Federally and by the States and Territories.

Just as we have with our support and facilitation of Postal voting, in this increasingly digital age, Australia Post is working with partners on developing an internet voting platform that will provide citizens with a choice of channels when it comes to participating in elections.

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