

Public Record Office Victoria
Standards and Policy

Recordkeeping Policy



Mobile Technologies and Recordkeeping

Issues Paper

Version Number: v1.0

Issue Date: 21/10/2013



Acronyms

The following acronyms are used throughout this document.

AGIMO: Australian Government Information Management Office; part of the Department of Finance and Deregulation, with responsibility to advise the Australian government and its agencies on a wide range of ICT issues.

AIMIA: Australian Interactive Media Industry Association

BYOD: Bring Your Own Device

DSD: Defence Signals Directorate, the information security branch of the Department of Defence. DSD is responsible, among other things, for the creation, maintenance and promulgation of the Information Security Manual, which complements the Protective Security Policy Framework (PSPF).

ICT: Information and Communication Technology.

PSPF: Protective Security Policy Framework.

Table of Contents

1. Introduction	6
1.1. Purpose and scope	6
1.2. Definitions	7
2. Context	8
2.1. Public records requirements	8
2.2. Technological shift	8
2.3. The benefits of mobile technology	9
2.4. Data-centric policy responses: addressing the challenge	10
2.4.1. International government responses.....	10
2.4.2. National government responses	11
2.4.3. Victorian policy responses	11
3. Key records management risks	13
3.1. Unauthorised electronic access	13
3.2. System breaches: Malware, viruses and other risks.....	13
3.3. Unauthorised physical access	14
3.4. Blurred distinction between personal and government data	15
3.5. Version control	15
3.6. Loss of control of data created via apps	16
4. Recommendations	17
4.1. Risk assessment for data.....	17
4.2. High level policy on mobile technology use	17
4.3. BYOD strategy explicitly considers data management	18
5. Appendix One: Interstate & Victorian policy advice	19
5.1. National and Interstate policies.....	19
5.2. Victorian policies	19
6. References	21

Copyright Statement

Copyright State of Victoria through Public Record Office Victoria 2013



Except for any logos, emblems, and trade marks, this work (*Mobile Technologies and Recordkeeping Issues Paper*) is licensed under a Creative Commons Attribution 3.0 Australia license, to the extent that it is protected by copyright. Authorship of this work must be attributed to the Public Record Office Victoria. To view a copy of this license, visit <http://creativecommons.org/licenses/by/3.0/au/>

Disclaimer

General

The State of Victoria gives no warranty that the information in this version is correct or complete, error free or contains no omissions. The State of Victoria shall not be liable for any loss howsoever caused whether due to negligence or otherwise arising from the use of this Issues Paper. This Issues Paper should not constitute, and should not be read as, a legal opinion. Agencies are advised to seek independent legal advice if appropriate.

Records Management Standards Application

The PROV Records Management Standards apply to all records in all formats, media or systems (including business systems). This Issues Paper identifies records management risks that are specific to mobile technology use by government agencies, and identified within this paper as being major issues. Agencies are advised to conduct an independent assessment to determine what other records management requirements apply.

Use of Terminology

For the purposes of this document, the terms 'record,' 'information' and 'data' used throughout should be understood as 'public record.'

Responding to this Issues Paper

Please respond to those questions or aspects of the issues paper to which you may have views about. In your response please identify both the section of the issues paper and the questions, issues and paragraphs to which you are responding. Additional ideas or comments on matters not addressed in the issues paper are welcomed. Please include them at the end of your response to a particular matter raised in the issues paper.

In responding to this issues paper agencies should be aware that PROV may be legally required to release the content and details of any response. If you have any concerns about information provided in your response, it is suggested that you seek legal advice.

Please email your responses to: Standards@prov.vic.gov.au.

The closing date for responding to the issues paper is: **22 November 2013**.

If you have any questions, please contact Alan Kong, Manager, Standards and Policy at alan.kong@prov.vic.gov.au or 03 9348 5720.

Executive Summary

The emergence of the mobile market is fundamentally changing the way government conducts its business and interacts with the public. This trend is by no means confined to Victoria or Australia. Internationally, governments have harnessed this technology to enhance the flexibility and efficiency of their business processes.

The use of mobile technology can improve and streamline government processes and also reduce operational costs. From a recordkeeping perspective, mobile devices allow information to be accessed and managed without being anchored to a set physical location or work station. However, any uptake of new technologies also creates new risks. These risks need to be managed.

This issues paper focuses on the aspects of mobile technology (including but not limited to Bring Your Own Devices (BYOD)) that have a direct bearing on the management of public records. This issues paper recognises the complexity of mobile technology and does not intend to examine policies relating to the technical or financial considerations of its use.

This paper proposes three recommendations to form the substance of a records management-oriented mobile technology policy for Victorian Government:

1. Agencies should assess the impact on the use of mobile technologies based on their existing business practices and needs. Identified risks such as those relating to data integrity and security should be addressed.
2. Agencies should cover any uses of mobile devices in their existing management and policy frameworks.
3. If BYODs are used for work within an agency, that agencies should consider a BYOD strategy aimed at mitigating information management issues associated with BYOD implementation.

This issues paper invites comment from Victorian Government agencies, and all local, national or international interested parties, in both public and private enterprise.

The consultation phase will conclude on **22 November 2013**. The comments received will inform an official policy from PROV regarding the records management component of mobile technology use.

1. Introduction

1.1. Purpose and scope

1 The purpose of this issues paper is to discuss the information management
2 implications of the move towards using various kinds of mobile technology to
3 perform the work of government.

4 This paper will consider:

- 5 • The context in which mobile technology is being adopted, and the strong
6 benefits to government in moving towards increased mobile technology
7 use
- 8 • Existing policy and guidance that has been produced to assist government
9 in mobile roll-out
- 10 • The potential risks and key issues facing government information
11 management posed by mobile technology use. Including, as a subset of
12 these issues, the particular challenges posed by Bring Your Own Device
13 (BYOD) strategies in government
- 14 • Recommendations for Victorian agencies to help ensure that information
15 management needs are identified and met with the deployment of mobile
16 technology.

17 Mobile technology, which is defined below, includes both Internet-enabled and
18 Internet-capable devices (such as smart phones, tablets, laptops, handheld
19 gaming devices and digital cameras) and non-Internet portable devices (such as
20 handheld sound recorders, portable storage items, and non-digital photographic
21 equipment).

22 As this paper is primarily concerned with the records management aspects of
23 mobile technology use, it will not consider:

- 24 • The procurement or financial aspects of mobile technology use
- 25 • Broader questions of mobile strategy related to scale, reach or
26 systematisation of government mobile device use
- 27 • Specific devices, apps or solutions, either as technical products or as
28 repositories of records.

29 The subject of this paper is intrinsically linked to two other key issues areas in
30 information management: managing the records of social media; and using the
31 cloud for information management purposes. Most Internet-capable mobile
32 devices use both social media and cloud applications, in some cases
33 exclusively.

34 To provide the full context for this paper it is recommended that you are familiar
35 with the following two PROV documents:

- 36 • [Social Media Policy](#)
- 37 • [Cloud Computing Policy](#).

1.2. Definitions

38 **Apps:** Specialised programs downloaded onto mobile devices to deliver one or
39 more specific services. Apps may allow local storage of data on the device, may
40 act as an interface between a mobile device and data stored elsewhere, or may
41 themselves serve as the repository for data (which is then typically stored on the
42 device or in the cloud).

43 **Bring Your Own Device (BYOD):** A strategy allowing employees, business
44 partners and other users to utilise a personally selected and purchased client
45 device to execute enterprise applications and access data.¹

46 **Mobile technology:** A generic term used to refer to the communication or
47 recording of data via a variety of portable devices that allow people to create
48 data wherever they are. Many, but not all, mobile devices are also connected via
49 cellular or wireless networks, which allows for the transmission, sharing and
50 accessing of data from remote locations.

51 **Protective Security Policy Framework (PSPF):** A framework created and
52 maintained by the Federal Attorney-General's Department to provide a shared
53 and comprehensive model for ensuring the security of government information.
54 The PSPF comprises policies and requirements that apply to all agencies, as
55 well as guidelines, tools, assessment templates and assistance with determining
56 appropriate agency-specific information security requirements.

57 **Syncing:** An abbreviation of "synchronisation", this refers to the act of bringing
58 two or more devices into harmony. This can involve transferring data so all
59 devices will have the same files (and the same versions of all files); and making
60 sure calendars, contact lists and apps are identical between devices. Syncing
61 can be done manually, but is often established as an automatic feature, so that
62 whenever a mobile device comes into contact with its paired system – either via
63 the Internet or by being within wireless network proximity – syncing will occur
64 without user intervention.

¹ Derived from the definition provided in the Gartner online glossary at <http://www.gartner.com/it-glossary/bring-your-own-device-byod/> (Accessed 21/2/2013)

2. Context

2.1. Public records requirements

65 Public records safeguard the entitlements of the people of Victoria, ensure the
66 efficient and equitable delivery of services, and protect the legal rights of the
67 State of Victoria. The *Public Records Act 1973* consequently imposes a duty on
68 the head of an agency to ensure that full and accurate records are made and
69 kept of the business of the office. This requirement to manage public records
70 applies equally in a mobile environment.

71 A public record is defined by the *Public Records Act 1973* as “any record made
72 or received by a public officer in the course of his duties”². It is important to note
73 that “record” shares the definition of “document” provided in the *Evidence Act*
74 *2008*, which is “any record of information”³, whether it be in writing, in visual
75 form, a sound recording, any electronic file, communication or transaction which
76 records information, or any physical object or thing upon which information is
77 recorded.

78 Essentially this means that any information made or received by a public servant
79 while performing their job is a public record, and needs to be treated and
80 managed as such, regardless of its form, location, or method of access.

81 The creation, maintenance, management, and disposal of public records are
82 regulated via the Public Records Standards. These documents provide agencies
83 with set parameters and guidance within which records can be effectively
84 managed.⁴

85 As the Victorian public sector embraces the range of opportunities offered by
86 new technologies, it is prudent to consider how these technologies can enhance
87 records management, and what considerations are relevant when rolling out
88 systems and strategies.

2.2. Technological shift

89 In line with the global uptake of these technologies, public sector agencies’ use
90 of the cloud, mobile technology, social media and associated technologies is
91 rapidly advancing. This trend is expected to continue and expand, especially with
92 respect to network-capable mobile devices. A recent Australian Interactive Media
93 Industry Association (AIMIA) study into mobile device use in Australia predicts
94 smart phone and tablet use to reach 86% and 70% respectively of the Australian
95 population in the next 5 years⁵.

96 In some cases, these changes are being strategically selected at enterprise or
97 sector level for the cost and effectiveness advantages they offer. Many agencies
98 are choosing cloud-based storage and application delivery services for these
99 reasons.

100 However, in other cases, change is being driven by individual public officers,
101 who are finding greater efficiencies in the use of these technologies. For

² *Public Records Act 1973*, (2) (a)

³ *Evidence Act 2008*

⁴ To view copies of the Public Records Standards please see the PROV website:

<<http://prov.vic.gov.au/government>>

⁵ AIMIA, 8TH Annual Australian Mobile Phone Lifestyle Index, September 2012,
http://www.aimia.com.au/enews/AMPLI/AMPLI%202012%20Report_FINAL_upd_Oct.pdf
accessed 23/3/13

102 example, the use of BYOD mobile technology is already underway in many
103 areas. Individual public officers at all levels of government are using privately
104 selected and owned mobile devices to both access organisational systems and
105 create work notes and records that fall outside of the office system.

106 **EXAMPLE**

107 The recent Victoria Police Information Security Culture Survey, published in
108 November 2012, revealed that 76% of responding police members use at least
109 one personally-owned [mobile] device in an average week to capture and/or
110 store law enforcement data. Personally-owned smart phones are being used by
111 45% of members. The reasons cited for doing so were convenience, accessibility
112 and the lack of appropriate equipment provided by the police.

113 The report states that "the practice of using personal devices for operational
114 policing is largely unmanaged and uncontrolled and poses significant information
115 management and security risks."⁶

116 **QUESTIONS:**

117 Q1: What plans does your agency have for using mobile technology to perform
118 work?

2.3. The benefits of mobile technology

119 Government business and program delivery can be substantially improved
120 through the use of mobile technology, both to increase its responsiveness to
121 emerging issues and to communicate effectively with the public.

122 The Australian Government has a stated commitment to improve the
123 accessibility of government to citizens. This is expressed in Victoria through the
124 government's new ICT Strategy⁷. To adapt a client-centric focus, agencies will
125 often utilise social media channels and purpose-built mobile applications by way
126 of sharing and receiving information with the public.

127 The freedom to perform government work outside the traditional office
128 environment is greatly enhanced by the capacity and reach of mobile
129 technology, enabling more government employees to work from home, from field
130 locations and in less conventional time patterns. Mobile technology allows
131 officers greater flexibility and innovation when conducting their work, increasing
132 response rate and the ability to address emerging issues promptly.

133 **QUESTIONS**

134 Q2: To what extent does your agency currently use, or explicitly permit the use
135 of, mobile technology to create, access and maintain the records of government
136 business?

137 Q3 To what extent is ad hoc technology use already occurring?

138 Q4: How do you anticipate this will play out in the coming 5 years?

139 Q5: Does your agency currently use mobile apps to communicate with the public
140 or deliver services?

141 Q6: How have the records of this activity been maintained?

⁶ Commissioner for Law Enforcement Data Security, *Survey of Victoria Police Information Security Culture – Survey Results*, November 2012, p 8,

http://www.cleds.vic.gov.au/content.asp?a=CLEDSBridgingPage&Media_ID=90896, accessed 10/4/13

⁷ Victorian Government ICT Strategy, accessed via this link 21/10/2013: <http://digital.vic.gov.au/>

142
143
144
145
146
147
148
149
150
151
152
153
154
155

EXAMPLE

In September 2011 the Department of Health launched a free iPhone and iPad app to help Victorians take control of their health and wellbeing anytime, anywhere by delivering health information to mobile devices.

The app responds to citizen preferences to get health information online and on the go. In 2011, 74 per cent of Australians who used the internet looked for health and medical information and medical apps were also among the most popularly requested apps for development.

The mobile app delivers comprehensive, reliable and easy to understand information – all of which has been quality-assured by medical experts.

Since its launch, the app has been downloaded by over 83 000 people and received widespread consumer and sector acclaim – including being featured by Apple in the best apps of 2011 App Store Rewind Program. The app has a 4.5 star rating (out of 5) and was a winner in the 2012 Australian Mobile Awards.⁸

2.4. Data-centric policy responses: addressing the challenge

2.4.1. International government responses

156
157
158
159
160
161
162
163
164
165

The opportunities and challenges provided to government information management by new technologies, and mobile technologies in particular, have given rise to a range of policy and strategic responses from public sector agencies.

One such strategic response is the US Government's Federal Mobility Strategy, which was composed as part of the wider Digital Government Strategy announced in May 2012⁹.

The US strategy focuses on both the capacity for mobile technology to improve outcomes and deliver efficiencies, and also on the need for this to happen in a secure, process-transparent environment.

⁸ Cited in Victorian Government, *2013-14 Government ICT Strategy*, p 11, <http://www.vic.gov.au/ictstrategy/wp-content/uploads/2013/02/Victorian-Government-ICT-Strategy-web.pdf>, accessed 25/03/13

⁹ The Mobility Strategy, which drew in responses from a wide range of stakeholders, had six key objectives:

- Incorporate the power and possibilities of mobility into Federal government efforts
- Build mobile technologies/services for reuse and share common services among agencies and public developers
- Efficiently manage mobile and wireless acquisition, inventory, and expenses
- Create a government-wide foundation to provide mobility services and functionality that are needed in all agencies
- Foster collaboration (among agencies, academia, industry, etc.) to accelerate mobility across government
- Establish governance structure for Federal mobility.

166
167
168
169

“New expectations require the Federal Government to be ready to deliver and receive digital information and services anytime, anywhere and on any device. It must do so safely, securely, and with fewer resources”.¹⁰ (Digital Government Strategy)

170
171
172
173
174
175

In recent months, a key focus of implementing the Digital Government Strategy has been on creating a broad compliance framework for mobile devices and apps according to a technical capabilities document released by the General Services Administration (GSA)¹¹. This move supports the release of the BYOD Toolkit¹², a document featuring practical case studies of BYOD implementation and a suite of model policies for agencies to adapt to their own circumstances.

2.4.2. National government responses

176
177
178
179

The Federal Attorney-General's Office, the Australian Government Information Management Office (AGIMO) and the Defence Signals Directorate (DSD) have focused on providing frameworks within which government manages access to information.

180
181
182
183
184
185
186
187

The Protective Security Policy Framework (PSPF)¹³ and the Information Security Manual (ISM)¹⁴ work together to provide a set of requirements and actions designed to protect the security and useability of government data. Importantly, the PSPF is device-and-service-agnostic with regard to the security needs of information. Agencies are expected to make individual decisions about how they protect and manage their data, but the structure imposes uniformity and consistency around the determination of what data is to be protected, regardless of its location.

188
189
190
191
192
193
194
195

AGIMO has signalled its intention to produce a Mobility Strategy for the Australian public sector, which will canvass the broad issues associated with mobile device use and its potential. DSD has also released a high-level advice to executives considering BYOD strategies¹⁵, and will shortly publicly release its detailed manual *Bring Your Own Device (BYOD) Considerations Manual*, which will follow the same theme as the *Cloud Computing Security Considerations Manual*¹⁶ in addressing big-picture issues of information security as well as practical methods to address them.

2.4.3. Victorian policy responses

196
197
198
199

Within the Victorian Government, the Council of Chief Information Officers has produced a range of policies and advisory documents on various aspects of information management and information security, some with direct relevance to the issues raised by mobile technology¹⁷.

¹⁰ US CIO Council, *Digital Government: Building a 21st Century Platform to Better Serve the American People*, May 2012, p1, <http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government-strategy.pdf>, accessed 30/3/13

¹¹ <https://cio.gov/digital-government-strategy-mobile-device-management/>

¹² US CIO Council, *Bring Your Own Device: A Toolkit to Support Federal Agencies Implementing BYOD Programs*, August 2012, <https://cio.gov/wp-content/uploads/downloads/2012/09/byod-toolkit.pdf> accessed 30/3/13

¹³ <http://www.protectivesecurity.gov.au/pspf/Documents/PSPF%20document%20map.pdf>

¹⁴ http://www.dsd.gov.au/publications/Information_Security_Manual_2012_Principles.pdf?&updatedNov12

¹⁵ DSD, Information Security Advice: BYOD Considerations for Executives, November 2012, http://www.dsd.gov.au/publications/csocprotect/byod_considerations_for_execs.htm

Accessed 1/04/13

¹⁶ DSD, *Cloud Computing Security Considerations*, September 2012, <http://www.dsd.gov.au/infosec/cloudsecurity.htm>, accessed 27/3/13

¹⁷ Please refer to Appendix 1 for a list of Victorian and interstate government advice

200 All of these documents affirm the Victorian Government's commitment to
201 compliance with PSPF and the principles of the Information Security Manual
202 (ISM) with regard to keeping government information safe (see list of policy
203 advice and diagram at Appendix One).

204 The *2013-14 Victorian Government ICT Strategy*¹⁸ identifies mobile technology
205 as a key area of government expansion, offering better, more flexible information
206 service delivery to the public. The strategy is built around the principle that better
207 information systems can mean better government.

208 "Government is an information-based enterprise and improving the way we
209 manage and analyse data is central to improving service delivery and policy
210 outcomes."¹⁹

211 The Strategy also flags the development of guidance for Victorian agencies on
212 mobile technology implementation. This guidance is scheduled to be released by
213 December 2013.

214 **QUESTIONS:**

215 Q7: Based on the policy and direction currently available in this area, what do
216 you see as the main policy gaps for addressing the information management
217 issues raised by mobile technology use?

218 Q8: Do you see a value in overarching / sector-wide policy and advice? If so,
219 how prescriptive do you think it should be?

¹⁸ Visit <http://digital.vic.gov.au/> for more information

¹⁹ Victorian Government, *2013-14 Government ICT Strategy*, p 7, <http://www.vic.gov.au/ictstrategy/wp-content/uploads/2013/02/Victorian-Government-ICT-Strategy-web.pdf>, accessed 25/03/13

3. Key records management risks

220 Mobile technology carries particular information management risks that are
221 either particular to, or greatly magnified in, the mobile context. These risks can
222 be broadly grouped as risks to the:

- 223 • **Security** of data. This class of risk covers not just inappropriate access to
224 private or confidential material, but risks to the preservation of data in
225 situations where mobile devices or apps make data loss more probable.
- 226 • **Quality** of data. The diffusing of government work across multiple devices,
227 with limited central control over them, creates significant potential for data
228 to be created and maintained in ad hoc ways that do not conform to
229 agency expectations regarding metadata, titling and management.
- 230 • **Ownership / control** of data. Data that is generated or managed on
231 mobile devices may be stored in apps or locations that make it difficult for
232 the agency to access or manage the data outside of the app itself, allowing
233 additional avenues for unscrutinised data leakage.

234 These three broad categories of risk are expanded in the following sections.

3.1. Unauthorised electronic access

235 Unauthorised electronic access can occur with any networked device, but these
236 risks may be amplified in the case of mobile devices. Mobile devices are often
237 used via public wireless connections, which may allow other users of the same
238 public connection to “see” what is being accessed on the device.

239 While these risks may appear to be IT-centric, they also have implicit record
240 management implications. The ability of agencies to fulfil their obligations with
241 regard to maintaining public records securely and safeguarding citizens’ privacy
242 are affected when protections for data security and integrity are weakened.

243

EXAMPLE

244 The US-based Third Annual Benchmark Study on Patient Privacy & Data
245 Security found that 94% of organisations had at least one data breach in the last
246 two years. The average number for each participating organisation was four data
247 breach incidents in the past two years.

248 The average number of lost or stolen records per breach was 2,769. The types
249 of lost or stolen patient data most often included medical files, billing and
250 insurance records.

251 81% permit employees and medical staff to use their own mobile devices such
252 as smart phones or tablets to connect to their organisation's networks or
253 enterprise systems. However, 54% of respondents say they are not confident
254 that these personally owned mobile devices are secure.²⁰

3.2. System breaches: Malware, viruses and other risks

255 IT systems that are managed centrally by IT staff can be systematically
256 protected against hacking, viruses, malware attacks and other deliberate and
257 unintended security breaches enabled by exposure to the Internet.

258 Extending this protection to mobile devices is made difficult for a number of
259 reasons. Mobile devices are diverse in structure while the applications within

²⁰ Ponemon Institute, *Third Annual Benchmark Study on Patient Privacy & Data Security*, December 2012, <http://www2.idexpertscorp.com/ponemon2012/>, accessed 1/4/13

260 these devices are proliferating. The type of structure used and how it is used will
261 influence the level of risk for system breaches to occur. For BYODs, it is often up
262 to the discretion of the user to maintain adequate software upgrades and
263 protection tools for their device.

264 Lack of good protection practices (such as anti-virus software) on a mobile
265 device can compromise not only data stored locally on that device, but also the
266 agency's main data storage, whether cloud or local server based. Malicious
267 software can proliferate through the system when data is being transferred from
268 a mobile device back to the agency dataset, especially if this transfer is
269 accomplished automatically via syncing.

270 **EXAMPLE**

271 The State University of North Carolina study, the Android Malware Genome
272 Project²¹, found that 86% of Android malware uses a technique called
273 repackaging, wherein a hacker downloads a popular application, decompiles it
274 and then adds a malicious payload. The application is then recompiled, and put
275 in the marketplace with a very similar name to the original product.

276 **QUESTIONS**

277 Q9: Does your agency have a BYOD strategy in place? If not, is there an implied
278 or stated prohibition on the use of personally owned devices to access corporate
279 information systems?

280 Q10: If your organisation uses, or intends to use, a BYOD approach, what
281 hygiene controls (virus protection, updating cycle, patching) do you think it is
282 reasonable to impose on device users?

3.3. Unauthorised physical access

283 When data is created or stored on a mobile device, the mobility of the device
284 itself poses the risk of security breaches. Devices can be mislaid, inadvertently
285 left behind in public areas, or stolen, more readily than a stable device that
286 remains in the office.

287 The loss or theft of a mobile device, whether Internet capable or not, poses risks
288 to the security of the data it contains. In the case of the device having been used
289 as the primary creator or storage point for the data, it may also result in lost
290 corporate data.

291 **EXAMPLE**

292 In December 2012, Human Resources and Skills Development Canada revealed
293 the loss of a USB stick containing the personal information and social security
294 numbers of 5,000 Canadians.

295 "We are currently analysing this incident with the view of preventing a similar
296 occurrence in the future," a representative said.

297 The Canadian Privacy Commissioner's office is working with HRSDC in an effort
298 to figure out what happened.²²

²¹ Yajin Zhou & Xuxian Jiang, *Android Malware Genome Project*, North Carolina State University, 2012, <http://www.malgenomeproject.org/>, accessed 1/04/13

²² The Canadian Press, "Government USB Key With Personal Info Of Thousands Of Canadians Goes Missing", *Huffington Post*, 28/12/2012, http://www.huffingtonpost.ca/2012/12/28/government-personal-info-missing-usb-key-canada_n_2377503.html, accessed 31/03/13

3.4. Blurred distinction between personal and government data

299 Several risks exist when the line between personal and business information is
300 blurred. These include:

- 301 • Mingled datasets, where messages, application data, or other kinds of
302 information contain both personal and business information in a single
303 object. This may be problematic when determining which information
304 should be captured back to the agency's system.
- 305 • Personal use of the personal device that breaches information or other
306 corporate policies. Even if these uses are made in private time, they have
307 the potential to involve and compromise government data if they expose
308 the device and its storage to external unauthorised access.

309 It may be difficult to remove and destroy memory components of mobile
310 communication devices. This is particularly relevant where mobile devices are
311 owned by the employee or are transferred to an external entity for reasons such
312 as repair or replacement.

313 Another risk is posed to the personal data stored on the device if the agency
314 requires the installation of certain security measures, such as the ability to
315 remotely "kill" the device after a specified number of incorrect password
316 attempts. There may be significant resistance from some employees to install
317 these systems on devices that they own and use for personally significant
318 matters when they understand the risk to their own data.

319 Personal devices can also be seized in legal discovery if the plaintiff has reason
320 to believe there is relevant work information on them. This is a matter that may
321 not be understood, or appreciated, by employees combining work and personal
322 use in one device.

323 **EXAMPLE**

324 "One morning you wake up, reach for your iPad to check the email but it doesn't
325 turn on. Your iPad is dead. Totally bricked. After a quick family investigation you
326 realize that the little one tried to guess your password to play Angry Birds before
327 you would wake up. Too bad the security policy enforced by the corporate email
328 account triggered your iPad self-destruction to prevent sensitive corporate data
329 from unauthorized access.

330 Angrier than those famous birds? Wait until you realize that the device itself can
331 be brought back to life and your corporate data restored. But that your pictures,
332 videos and songs are gone. Forever. (Note: the case above is based on a true
333 story, my son's name is Luca.)"²³

3.5. Version control

334 Version control of documents can prove challenging for agencies, especially if
335 the agency is not using a shared collaborative workspace with a document
336 check-in / check-out system. Individual workers can develop drafts on their
337 mobile devices and those drafts are not captured within the agency's business
338 system.

339 Some organisations manage the risk of losing control of versions of documents
340 via automated syncing, whereby devices harmonise their datasets with the
341 central data store either via the cloud (if cloud storage is in use) or when they are
342 in the wireless vicinity of the office network.

²³ Cesare Garlati, "The Dark Side of BYOD: Privacy, personal data loss, and more", *Venture Beat*, 28 March 2013, <http://venturebeat.com/2013/03/28/the-dark-side-of-byod-privacy-personal-data-loss-and-more/>, accessed 1/04/13

343 While automated syncing can reduce the risk of versions of documents being
344 lost because they are sitting on mobile devices, it is an imperfect system if not
345 accompanied by training and information controls (such as file naming, folder
346 structure or classification scheme). Syncing aims to harmonise folders with the
347 same names and identities on all the linked devices; if files are created outside
348 the specified folders, they are not automatically synced and may be missed.

3.6. Loss of control of data created via apps

349 Apps, which are one of the main ways in which mobile device users' access and
350 create data, vary greatly in how they manage and store data. Many apps store
351 the data associated with them within the app itself, either locally on the device's
352 hard drive or sometimes in the cloud. While some apps are designed to facilitate
353 data export to other formats, many are not.

354 This can create a range of records management problems for agencies:

- 355 • Data created in apps may not be able to be integrated into the agency's
356 overall information management system, either because it cannot be
357 extracted at all, or because it cannot be rendered into a shared format.
- 358 • Data created in apps may, either legally or by default, be considered the
359 property of the app provider. This is not an acceptable position for public
360 records of the state.
- 361 • Apps can become unavailable or be withdrawn from the market with little
362 warning, sometimes taking data with them.
- 363 • Agencies face the difficulty of data potentially being created in a large
364 number of apps selected by individuals based on their usefulness and
365 functionality, without necessarily considering data retention issues raised
366 by these activities.

4. Recommendations

367 PROV proposes the following three recommendations regarding the information
368 management implications of mobile technology use in government

369

370

371

372

- Risk assessment for data
- High-level policy on mobile technology use
- BYOD strategy explicitly considers data management.

4.1. Risk assessment for data

373

374

375

376

PROV recommends that agencies use the PSPF assessment process (in addition to existing privacy policies, relevant retention and disposal authorities and other agency-approved risk assessment strategies) to determine the risks involve when accessing or using these records on a mobile device.

377

378

379

380

381

382

A great many public records are open to public inspection, and the mission of open government is to facilitate access to as many datasets as possible. However, some public records are not suitable for open access. Maintaining the privacy of individuals and the confidentiality of certain aspects of government business needs to be a core criterion in any decision making about how records are handled and managed.

383

384

385

386

387

388

389

390

When agencies are moving towards mobile technology for business delivery, it is prudent to assess:

- What additional risks mobile technology poses to data integrity and security
- How these risks might be mitigated
- What level of risk is acceptance for particular kinds of records, as it is probable that agencies will have records with different levels of security requirements.

4.2. High level policy on mobile technology use

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

PROV recommends that agencies use mobile technology to develop high level policy and governance to guide their use from an information management perspective. It is advisable that the policy should cover the following:

- How the use of mobile technology when creating, assessing or managing records complies with state and sector wide law, security and information management requirements. This includes relevant PROV Standards, SEC guidelines and policies, PSPF requirements, privacy obligations and any agency-specific or industry-specific guidelines.
- Device requirements; including virus protection, patching protocols and system basics.
- Any boundaries that the agency wishes to place on the nature and number of apps used on the device and the method by which corporate data is accessed.
- Education for staff using mobile devices regarding their responsibilities as public officers to keep full and accurate records of the business of their office, regardless of how it is produced.
- Technical issues where a decision point is required to help manage data security or maintenance, such as whether the organisation will auto sync all files from all devices, whether corporate IT will support all mobile devices.

4.3. BYOD strategy explicitly considers data management.

411 PROV recommends that agencies that employ or intend to employ a BYOD
412 approach develop a BYOD strategy, policy, and / or procedure that explicitly
413 consider records management needs, including:

- 414 • The responsibility of the device owner to maintain the device safely and
415 securely
- 416 • Limitations (if any) on apps used to access, create and manage agency
417 data
- 418 • Expectations around version control, syncing and device management
- 419 • Requirements for remote access to the device by agency IT staff, if
420 needed.

421 **QUESTIONS**

422 Q11: Does your agency currently have, or is it intending to prepare, high level
423 policy and guidance around the use of mobile technology?

424 Q12: Do you think the proposed recommendations are reasonable? If so, why? If
425 not, in what way do they fall short or go too far?

426 Q13: Are there any other issues relating to recordkeeping and information
427 management with mobile technology that we have not discussed in this paper?

5. Appendix One: Interstate & Victorian policy advice

5.1. National and Interstate policies

428
429
430
431
432
433
434
435
436
437
438
439
440

Key materials include:

- [Advice from State Records NSW on messaging technologies](#)
- [Advice from State Records WA on Sanitizing Digital Media and Devices](#)
- [Advice from Tasmanian Archive and Heritage Office on Web 2.0 and social media records](#)
- [Advice from Territory Records Office on portable flash memory devices](#)
- [Advice from Territory Records Office on social networking and collaboration applications](#)
- [Checklist for the Cloud by National Archives of Australia](#)
- [Advice from Public Record Office Victoria on Social Media and recordkeeping](#)
- [Guidelines from Public Record Office Victoria on Cloud Computing and information management](#)

5.2. Victorian policies

441
442
443
444
445
446
447
448
449
450
451
452
453
454

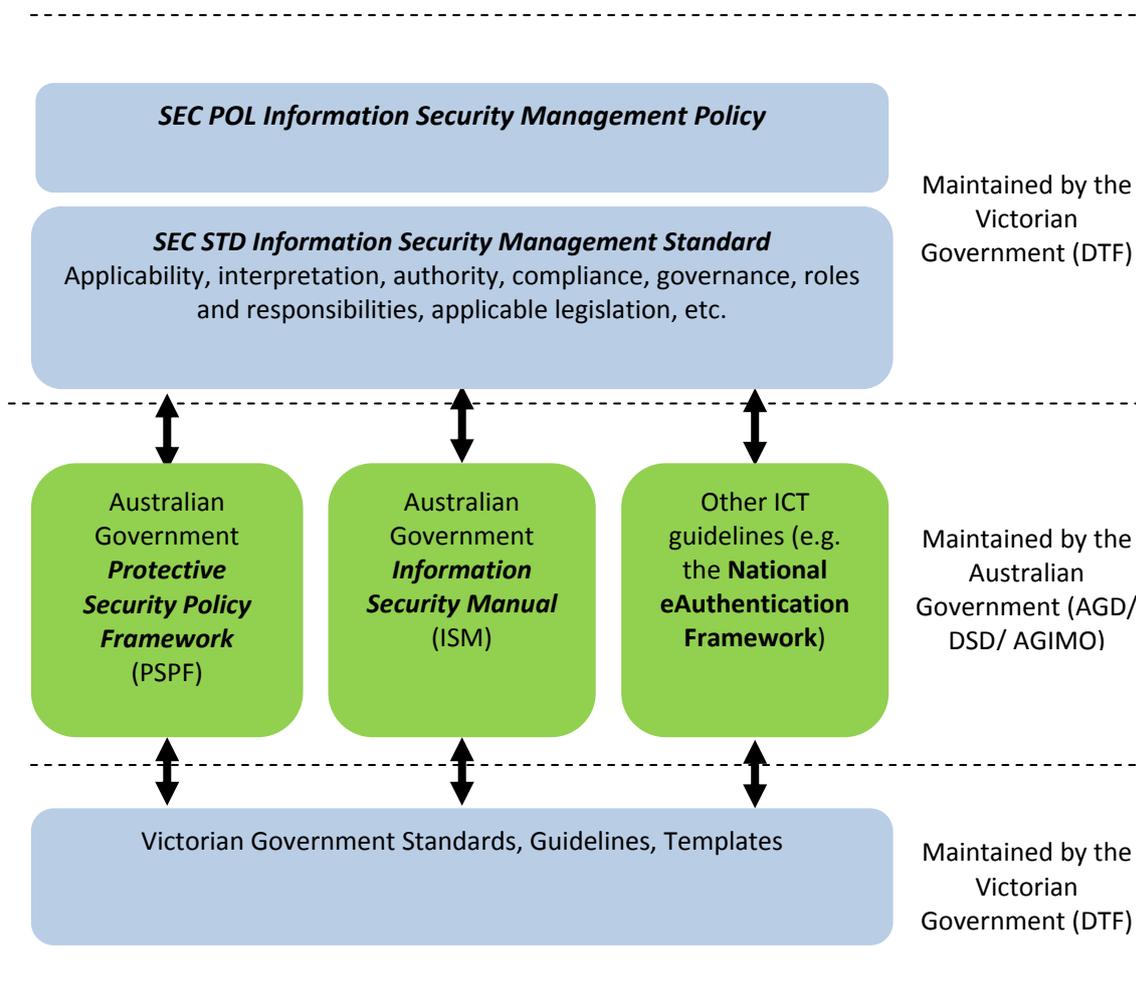
Policies include:

- *SEC POL 01 Information Security Management Policy – 2012*
This policy establishes an overarching requirement for agencies to develop security management strategies in accordance with national plans.
- *SEC STD 01 Information Security Management Framework – 2012*
This framework requires agencies to develop an agency-specific information security management framework (ISMF) consisting of an information and communication technologies (ICT) Risk Assessment Report, an Information Security Policy, An ISMF Self-Assessment Compliance Report, and an Incident Response Plan. These documents must consider and build in all the information services used by the agency, including mobile ones.
- *SEC GUIDE 06 Information security cloud computing security considerations guideline - December 2011 v1.0*²⁴

²⁴ All these policies and guidelines can be found at <https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security>, accessed 4/03/13

455
456

The following diagram, from the Information Security Management Policy²⁵, shows the relationship of the various documents:



²⁵ Victorian Government , SEC POL 01 Information Security Management Policy – 2012, <https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security>, accessed 4/03/13, p 4

6. References

- 457 AIMIA, 8TH Annual Australian Mobile Phone Lifestyle Index, September 2012,
458 http://www.aimia.com.au/enews/AMPLI/AMPLI%202012%20Report_FINAL_upd_Oct.pdf
459 accessed 23/3/13
- 460 Australian Attorney-General's Department, *Protective Security Policy Framework:*
461 *Document Map*, 2013,
462 <http://www.protectivesecurity.gov.au/pspf/Documents/PSPF%20document%20map.pdf>,
463 accessed 30/03/13
- 464 Australian Attorney-General's Department, *Protective Security Policy Framework:*
465 *Information Security Policy*,
466 <http://www.protectivesecurity.gov.au/informationsecurity/Pages/default.aspx>, accessed
467 31/03/13
- 468 Commissioner for Law Enforcement Data Security, *Survey of Victoria Police Information*
469 *Security Culture – Survey Results*, November 2012,
470 http://www.cleds.vic.gov.au/content.asp?a=CLEDSBridgingPage&Media_ID=90896,
471 accessed 10/4/13
- 472 Defence Signals Directorate, *Cloud Computing Security Considerations*, September
473 2012, <http://www.dsd.gov.au/infosec/cloudsecurity.htm>, accessed 27/3/13
- 474 Defence Signals Directorate, *Information Security Manual: Principles*, September 2012,
475 [http://www.dsd.gov.au/publications/Information_Security_Manual_2012_Principles.pdf?&](http://www.dsd.gov.au/publications/Information_Security_Manual_2012_Principles.pdf?&updatedNov12)
476 [updatedNov12](http://www.dsd.gov.au/publications/Information_Security_Manual_2012_Principles.pdf?&updatedNov12), accessed 31/03/13
- 477 Ponemon Institute, *Third Annual Benchmark Study on Patient Privacy & Data Security*,
478 December 2012, <http://www2.idexperts.com/ponemon2012/>, accessed 1/4/13
- 479 *Public Records Act 1973*,
480 [http://www.legislation.vic.gov.au/Domino%5CWeb_Notes%5CLDMS%5CPubLawToday.](http://www.legislation.vic.gov.au/Domino%5CWeb_Notes%5CLDMS%5CPubLawToday.nsf)
481 [nsf](http://www.legislation.vic.gov.au/Domino%5CWeb_Notes%5CLDMS%5CPubLawToday.nsf) accessed 3/6/13
- 482 US Federal Administration, *National Dialogue on the Federal Mobility Strategy: Draft*
483 *Federal Mobility Strategy Outline*, January 2012, [http://mobility-](http://mobility-strategy.ideascale.com/a/pages/draft-outline)
484 [strategy.ideascale.com/a/pages/draft-outline](http://mobility-strategy.ideascale.com/a/pages/draft-outline), accessed 30/3/13
- 485 US CIO Council, *Digital Government: Building a 21st Century Platform to Better Serve*
486 *the American People*, May 2012, p1,
487 [http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-](http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-governent-strategy.pdf)
488 [governent-strategy.pdf](http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-governent-strategy.pdf), accessed 30/3/13
- 489 US CIO Council, *Bring Your Own Device: A Toolkit to Support Federal Agencies*
490 *Implementing BYOD Programs*, August 2012, [https://cio.gov/wp-](https://cio.gov/wp-content/uploads/downloads/2012/09/byod-toolkit.pdf)
491 [content/uploads/downloads/2012/09/byod-toolkit.pdf](https://cio.gov/wp-content/uploads/downloads/2012/09/byod-toolkit.pdf) accessed 30/3/13
- 492 Victorian Government, *2013-14 Government ICT Strategy*, [http://digital.vic.gov.au/wp-](http://digital.vic.gov.au/wp-content/uploads/2013/02/Victorian-Government-ICT-Strategy-web.pdf)
493 [content/uploads/2013/02/Victorian-Government-ICT-Strategy-web.pdf](http://digital.vic.gov.au/wp-content/uploads/2013/02/Victorian-Government-ICT-Strategy-web.pdf), accessed
494 25/03/13
- 495 Victorian Government, SEC POL 01 Information Security Management Policy – 2012,
496 [https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-](https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security)
497 [information-security](https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security), accessed 4/03/13
- 498 Victorian Government, SEC STD 01 Information Security Management Framework –
499 2012, [https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-](https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security)
500 [information-security](https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security), accessed 4/03/13
- 501 Victorian Government, SEC STD 02 Critical Information Infrastructure Risk Management
502 – 2012, [https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-](https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security)
503 [information-security](https://www.dtf.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security), accessed 4/03/13
- 504 Victorian Government, SEC GUIDE 06 Information security cloud computing security
505 considerations guideline - December 2011 v1.0,

- 506 [https://www.dff.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-](https://www.dff.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security)
507 [information-security](https://www.dff.vic.gov.au/CA257310001D7FC4/pages/policies-and-standards-information-security), accessed 4/03/13
- 508 Yajin Zhou & Xuxian Jiang, *Android Malware Genome Project*, North Carolina State
509 University, 2012, <http://www.malgenomeproject.org/>, accessed 1/04/13

END OF DOCUMENT