

Access to and Use of Public Sector Information: The Academic Re-user Perspective

By Bronwyn Allen

Introduction

"[P]ublic sector information is a national resource... releasing as much of it on as permissive terms as possible will maximise its economic and social value to Australians and reinforce its contribution to a healthy democracy" (Government 2.0 Taskforce, 2009)

The Declaration of Open Government, made on 16 July 2010, codified the commitment of the Australian Government to ideals of openness, engagement and participation in government (Department of Finance 2010). An aspect of this ideal of open government is the conceptualisation of Public Sector Information (PSI) as a national resource. Collected and generated by the Government using public money, it belongs to all citizens. As such, where possible and practicable, it should be freely available to benefit all citizens.

The Office of the Australian Information Commissioner (OAIC) has developed the principles on open public sector information (OAIC 2011b, see Appendix III), through an extensive process of community consultation. The principles are intended to provide guidance to Government agencies on how they should be approaching the release of PSI, and to the community on what they should expect from Government agencies. The principles provide a lodestone for PSI custodians, to more closely conform to the ideals of free and open access to public information resources.

Exactly how well Australian Government agencies are conforming to these ideals of open government and the principles on open PSI is an open question, and an important one. Effective measurement of this question would allow recognition of successes, which provides benchmarks and case studies for expanding successes into other areas, and identification of areas for improvement, which provides guidance on where and how to target interventions in the future.

The OAIC has recently conducted a survey of Government agencies to gather data on their information management practices, in light of the principles on open PSI (OAIC 2011a). This focus on the practices and processes of PSI providers is an important line of inquiry that could reveal how well the principles on open PSI are accommodated and reflected in the culture of Australian government agencies.

The present study, which is being conducted for the OAIC, is aimed at examining the experiences of re-users of PSI. It serves as a valuable complement to the OAIC's survey of government agencies. Exploration of the experiences of re-users of PSI allows for a comparison between the intention of data custodians and the reality experienced by re-users. This could give context to any developments in open access to PSI on the side of PSI providers, by revealing how the issue is perceived from the re-user perspective, and therefore which aspects of the experience are perceived as problematic and need to be altered.

Studies of PSI re-users would help develop an understanding of the context of the re-use of PSI. This could provide ideas for concrete improvements in the provision of PSI, and assist the OAIC to maximise the value of the principles on open PSI by producing more detailed and specific guidelines about how to more effectively implement the principles. Without a proper understanding of the context of re-users, modifications to processes may prove to be irrelevant or even counter-productive to the goals that re-users are trying to achieve with PSI.

Study Focus

The population selected for this study is comprised of academic re-users of PSI. Academic re-users were selected as a group who are likely to have an ongoing need to access PSI, and therefore a breadth of experience to draw on in reflecting on open PSI. Additionally, the population of academics encompasses a broad range of subject areas, potentially resulting in experience of a broad cross-section of PSI providers and types.

In the development stage of this project, 3 research questions were provided by the OAIC, in order to give focus to the study and ensure that the outcomes would be useful. They are:

- 1) Is the PSI that academic re-users require available and accessible to them?
- 2) Are there any restrictions or barriers to effective use of PSI by academic re-users?
- 3) Have academic re-users noticed any change in the availability and accessibility of PSI over the last 5 years?

This project is a pilot study intended to collect preliminary data on the open PSI landscape from a re-user perspective, identify potential areas for improvement, and develop a viable methodology through which more extensive studies can be conducted.

Methodology

The methodology selected for this study is semi-structured qualitative interviewing. The advantage of qualitative interviews is that they allow for new ideas and

concepts to be revealed, rather than limiting responses to confirming or rejecting existing ideas or concepts (Wilson 2000). In the case of open PSI in Australia, this open-ended research methodology is especially important. There are strong concepts of how things should be, in the form of the principles on open PSI, but little research has been conducted into the experiences of the re-user, especially in Australia. It is therefore important to remain open-minded about what those experiences might be, and allow the re-users to speak for themselves, in their own words, of their experiences (Bryman 2008). Once information on those experiences has been obtained, quantitative research could allow for the examination of how prevalent such experiences are.

Sample

Participants in this study were academics who use Australian PSI in their academic work. Potential participants were located initially through contact with the Australian National Data Service (ANDS), which identified several academics who use PSI in their work and had had contact with ANDS. Additional participants were solicited through contact with departments and academic organisations within Australian universities. Further potential participants were also identified through a community web forum which hosted a discussion on Australian PSI. Participants were also located through a snowballing technique, where participants identified colleagues who had relevant experience and might be interested in participating.

A total of 6 interviews were conducted, with academics in the fields of ecology, entomology, urban planning, and the law. Prior to each interview, the interviewer conducted limited research on the participant, including, but not limited to, their main field of interest, and what kind of PSI they were likely to be most interested in. This facilitated rapport building between the interviewer and the participants, and helped to ensure that the interviewer would have a basic understanding of the context of the participant's work.

Interviews

The semi-structured qualitative interview methodology chosen for this project requires that the interview questions be open-ended and as neutrally positioned as possible. It is important for the interviewer to not unduly influence the responses by structuring the questions such that a certain kind of response is more natural, or obviously expected. However, it is also important that the questions elicit responses that are relevant to the purposes of the study.

The semi-structured interview allows these two requirements to be balanced. Open-ended questions can be constructed in a broad way to allow participants to give their opinions without being overly influenced by the structure of the question. The interviewer can then further explore the participant's initial responses through follow up questions. Follow-up questions also provide the opportunity to cover topics of particular interest to the study that have not come up in the course of the interview, without unduly directing the initial responses.

Academic re-users of PSI may reasonably be expected to have relevant experiences and opinions on 6 out of the 8 principles on open PSI. The two excluded principles involve the management of PSI from the provider perspective, so re-users are unlikely to have had the opportunity to directly observe those aspects of PSI. The relevant principles are:

- Principle 1 – Open access to information – a default position
 - Principle 2 – Engaging the community
 - Principle 5 – Discoverable and useable information
 - Principle 6 – Clear re-use rights
 - Principle 7 – Appropriate charging for access
 - Principle 8 – Transparent enquiry and complaints process
- OAIC 2011b (see Appendix III for the full text of the principles)

Additionally, there are two other aspects the re-user's experience of open PSI that must be explored. They are:

- Changes to the accessibility of PSI over the last 5 years
- Suggestions for improvements to the provision of PSI

Given the open ended nature of questions in a semi-structured interview, questions may be expected to speak to more than one of the principles. It is important for the interviewer to be aware of all of the relevant principles and criteria while conducting the interview. The interviewer must also possess a deep understanding of the principles on open PSI. This will allow follow up questions to be appropriately targeted, ensuring that participants have the opportunity to expand on thoughts that are of particular relevance to the study. It will also ensure that any criteria that have not come up in the course of the interviews can be addressed with more direct follow-up questions towards the end of the interview. The interview questions used in this pilot study are reproduced in Appendix I.

Ideally interviews would be conducted in person, but in this study most interviews had to be conducted over the phone, due to the different geographic locations of the participants and the interviewer. Audio recordings of all interviews were made, and the recordings were transcribed soon after the interview was completed.

The interview script used for the pilot study was generally effective. Interviews generally took between 20 and 30 minutes. This was enough time to cover all of the principles on open PSI, and allowed time for follow up questions and general comments at the end of the interview.

Analysis

The analysis of the interviews was conducted in three stages. The first stage, transcription, was a preparatory step, and involved simply listening to the interviews and transcribing them. Notes were taken at this stage of particularly interesting statements, but the aim was simply to transform the audio recording into an accurate written record.

Stage two involved a close reading of the interviews, in order to pick out relevant or interesting statements. The statements selected were classified as relevant to one or more of the principles on open PSI, or under the headings “changes to PSI over time” or “improvement suggestions”. Statements that included aspects relevant to more than one criteria were classified under multiple criteria.

The third stage involved examination of each of the classification criteria in turn. For each principle, the statements were scrutinised again. Prevailing opinions common to most or all of the participants were noted. Dissenting opinions were also noted. Supporting evidence, such as anecdotes, were read closely to identify important themes or examples.

These principle by principle examinations were used to summarise the experiences of the participants in regard to each principle. Where possible, concrete or specific examples were noted in the analysis to illustrate the ideas expressed.

Results

Principle 1 – Open access to information – a default position

“I think free access to PSI, it’s very hard to argue against.” – PW

Many of the participants were very aware of the idea of Principle 1, and extremely supportive of it, but their experiences in actually finding and re-using information and data that they needed indicated that the implementation of this principle is still in its early stages in some areas, and there are barriers its full adoption.

Some participants had had the opportunity to compare their experiences of accessing Australian PSI to the accessibility of PSI in other countries. The legal sector in Australia was felt to be a world leader in the field of open PSI, whereas open access to scientific PSI in Australia seems to lag behind other countries, notably the USA, by a large margin.

“I found that that’s a big difference between Australian agencies and the US, for example, NASA basically has all their data online. They set up very good websites where you can search and download things instantly. In Australia, for anything other than broad, simple datasets, you generally have to email them and arrange how you’re going to obtain the data and put together a data sharing agreement.” – JB

While all participants were able to find at least some of the PSI they re-use online, participants in the sciences reported occasions where they had to contact agencies directly, and obtain the PSI on disk by mail, or even by going to the agency in person and downloading the PSI to a portable hard drive.

Participants praised initiatives like the Atlas of Living Australia and the Australian Urban Research Infrastructure Network that are working towards improving the accessibility of PSI by creating aggregates and portals for the online dissemination of PSI. This obviates the need for individual researchers to approach public sector

organisations and request access, allowing more people to become aware of the information and breaking down barriers to access. While these kinds of initiatives are in their early stages, and are therefore still patchy, participants who were users of these services were enthusiastic about their potential.

Cultural factors within PSI providers have an important influence on the extent to which open access is provided. Within the legal sector, one participant perceived a widespread understanding of the importance of open access to PSI, so that providers seem to take it for granted that access to data must be provided freely as a matter of course:

"If we are talking about in 2012, I must say in Australia, it's very encouraging compared to all the other various jurisdictions. The others are very good, I'm not saying they are not good, but I'm just saying in Australia, there's almost an attitude that it should be available. We went from in 1995 saying it's only for professionals, [...] to now, there is an acceptance that the information should be there." – PW

Cultural barriers preventing open access to PSI that were mentioned include the sense that the PSI providers may be concerned about how the PSI will ultimately be employed, and that they may harbour a desire to keep tight control of the PSI they are responsible for.

"There's still a lot of custodians in government departments are concerned about how the data will be used. You could have a dataset that someone releases within the department, but that dataset could be then be used by consultants or researchers, or anyone, to actually provide information against one of the policies of that department. Then that data custodian mightn't be in the good books of their particular minister or secretary because they released data which has then found its way into an evidence based finding which is contrary to a government policy." – VM

There was a general understanding among participants of the kinds of reasonable exceptions that would prevent PSI from being made publically available. Privacy and security were two of the most mentioned. As one participant stated:

"You wouldn't want to tell someone the exact location of the last population of a rare orchid, because you would get collectors going to wipe it out." – BF

Principle 2 – Engaging the community

"Even though it is a bit annoying having to email them and have a conversation with them just to get your hands on the data, once you've established that conversation, they can be quite helpful in making sure it's useable to you." – JB

"So that was a matter of making contact with someone, talk about the type of data they would make available, under what conditions, and then just work through it. And then it's just a matter of keeping in touch, and if you're not getting any feedback ring them up." – EC

Participants reported high levels of satisfaction with the responsiveness of the PSI providers they have had contact with. Respondents did not find it difficult to discover how to contact PSI providers, and found that questions and problems were

generally resolved in a timely manner. PSI providers proved helpful in resolving technical issues such as data formats, including how to effectively use or transform unfamiliar formats.

Participants reported that when they encountered errors in the PSI they re-use, they were able to report them to the providers, who made corrections quickly, and re-issued the corrected PSI.

"Over time, [...] courts, legislatures and so on have actually improved the quality, because they've got exposure to this technology, expectations from users, from our feedback, from all that, they take that on board, and they developed over time." – PW

One participant reported consultation from PSI providers in the legal sector before the release of PSI on how best to format and make available new PSI.

"We get contacted by courts and tribunals that may have just begun, they don't even have any decisions, but they say we're coming on line soon, can we now work with AustLII and others to set up the right feeds, so that information can get out there." – PW

One participant had found that some PSI provider organisations had been limited in their ability to respond effectively to technical enquiries due to a lack of resources within their organisations:

"Some people are really trying to do the right thing, and sometimes are inhibited by time, money or technology. Some people are less forthcoming and you do get things where 'we'd like to help you, but we're so overworked and understaffed right now, that basically, bummer off.' Well, they're not quite that rude, but there's a lot of issues that come into play here." – BF

Principle 5 – Discoverable and useable information

"Not everyone puts stuff into metadata properly. I think there's a lot of change that's happened in the individual departments and the behaviours of people who are managing information, and their documentation and their delivery. It's just really hard to find data sometimes, you have to put a lot of time into it." – EC

The two most commonly mentioned sources for finding new PSI were word of mouth and online search tools. Most participants said that their connections to colleagues within their organisation and their field was the most fruitful source for new information. Searching online through Google was a common technique, although results could be variable and difficult to wade through. Searching or browsing through government websites, include browsing metadata, was also common and often more productive than more general search engines.

The importance of appropriate metadata standards that were correctly and consistently applied was emphasised by several participants.

Participants noted approvingly that some PSI providers, such as Geoscience Australia, provide their data in multiple formats, which allows re-users to select the format they require. Participants mentioned that they sometimes received data in a

format they could not use, and were forced to convert it. Data is also often provided in a CSV format, which has the advantage of being simple, common and open, but can also require a lot of work to transform into another format before it can be used.

Principle 6 – Clear re-use rights

"Sometimes the agreement is a creative commons license, which are probably quite safe for an individual researcher to sign. Sometimes those agreements are probably full license agreements that have just been done conveniently online, and we are not delegated to take responsibility on behalf of [our organisation] to sign those." – EC

Participants tended to be highly aware of the licensing agreements they entered into when accessing PSI. Creative Commons licenses were mentioned approvingly by several participants.

Keeping track of licenses has occasionally proved problematic for some participants. One suggestion was that the license agreement should be included in a dataset download bundle as a standard practice, to help ensure that the specific license is stored with and linked to the dataset it pertains to. This is particularly important for those re-users who use a number of different datasets, and must be diligent about recording and storing their various licenses.

Some participants felt that PSI re-use rights were often inappropriate and overly restrictive. For example, some licenses state that the PSI can be used only for the specified project, so that if the re-user wishes to use information again for another project, they would have to enter into another agreement and pay the administration fee again. This also prevents the re-user from sharing the PSI they have obtained with colleagues for legitimate research purposes. As one participant asked:

"This is public data, it's already been retrieved, there shouldn't be any more charges involved, what's wrong with me giving it to my colleague?" – JB

Australian Government policy is that PSI be released under a Creative Commons Attribution (CC BY) license (Attorney-General's Department 2012), meaning that re-users are free to share and remix the PSI, including for commercial purposes, as long as they correctly attribute its source. However, some participants reported that in some cases different kinds of Creative Commons licenses are used, which can be unnecessarily restrictive, such as an Attribution No Derivatives (CC BY-ND) license which stipulates that the PSI must be presented whole and unchanged (Creative Commons n.d.).

Principle 7 – Appropriate charging for access

"I'd say more recently the only charges usually relate to administrative charges. So in QLD, if you want to access the data via a DVD, then there may be a charge related to provision of the data. So, recovering their administrative costs. It's a long time since we've actually had to pay for data." – EC

Charges for accessing PSI were felt to be reasonable. Participants reported that many resources were available for free. A nominal administrative charge was the most common charge noted, and participants generally agreed that a small charge to cover the costs of preparing and providing PSI was fair. One participant did suggest that a greater emphasis from the Government on funding the ongoing costs of maintaining PSI access would be an important improvement.

Principle 8 – Transparent enquiry and complaints process

The participants in this study had not had cause to become involved in a formal complaint or enquiry process.

Change in availability over last 5 years

"...definitely there is more data available than there was when I first started doing this, and it is easier to obtain." – JB

All participants have noticed a major improvement in the availability of PSI over the past 5 years. Many were aware of recent policy changes supporting open access to PSI.

Changes discussed included more datasets and other PSI being made available online, access charges being reduced or dropped entirely, the increasing use of less restrictive or Creative Commons licenses, and the introduction of data services and initiatives aimed at making PSI more accessible.

While the participants were universally enthusiastic about the positive changes in the availability of Australian PSI, many were also careful to mention that there is still a long way to go. One participant mentioned her excitement at discovering a website that purported to provide access to a broad range of PSI, only to be disappointed in exploring the site and discovering that so far it did not contain anything useful to her.

Improvement suggestions

"Well, it would be great if there was a one stop shop, so that all this information that's in all these government departments, where you almost need to know which departments have which function. You don't always have to know, you know, where do you go to get a land use map? Where do you go to get a vegetation map? There's so much data. And to have better search tools, and better communication tools... It could just be so much easier than it is now. It's all over the place." – BK

One common suggestion as to how access to PSI could be improved was to encourage common standards and a central access point, so that PSI could be found and re-used easily by different people and for different purposes, rather than just by people who already know what they are looking for. Common standards for data would include metadata standards that are consistent across Australia, as well as standard data formats.

Another suggestion was to focus on making datasets themselves fully downloadable, rather than a digested or prepared analysis of the data. This would allow datasets to be manipulated and combined by the individual re-user, perhaps overlaying a PSI dataset with datasets they have created in their own work. As one participant said:

"A lot of government departments put out these nice mapping viewers and things, which are good for one user group, but a lot of people want the actual data, not just a view of the data." – VM

A greater focus on providing the resources required to maintain and improve PSI was also suggested. A budgetary focus viewing PSI as a core asset that must be maintained, rather than a do it once and forget it approach, or charging re-users for the preparation and maintenance of the PSI they request. As one participant opined:

"...it's a core service, a core infrastructure like hospitals and roads. Data starts to be seen like a tangible piece of infrastructure that has to be maintained." – VM

Limitations of the Study

While academic re-users are a convenient and valuable population group to focus on for studying PSI re-users, there are some difficulties with accessing this population. Academics tend to be very busy, often managing multiple competing priorities including classwork, research, and administration. It can be difficult to find time in their schedules for interviews. In the pilot study, the most productive methods of recruiting participants involved referrals, either through ANDS, or by participants referring the interviewer to colleagues who could also be interested in participating. Future studies should ensure that the timeframe planned for conducting interviews is a long one, and that interviewers are prepared to be flexible in their scheduling.

There were some questions in the pilot interview script which proved problematic. Specifically, question 5 and question 10 (see Appendix I) were intended to access different experiences. Question 5 was designed to find out whether there was PSI that the participant was aware of and interested in, but which was not useable to them for some reason. Question 10 was intended to be about PSI which was desired by the participant, but which was either not discoverable, or non-existent. In practice, those two questions were too similar to be useful, and when both were asked, it was confusing to the participants. In future studies, Question 10 should be dropped, and the distinction between PSI that is not useable and PSI that is not discoverable could be elicited through follow up questions.

Questions intended to address Principle 2 – Engaging the community, seemed ineffective in eliciting responses about PSI providers consulting re-users on what information to publish. It is not clear if this is because participants happened to have no relevant experiences, or if PSI providers are ineffective in this area. An additional question that may be more successful in targeting experiences relevant to Principle 2 is proposed for future studies: "Have you ever been asked by data custodians what

PSI you would like, or how you would like it?” This question would more directly address this principle, and ensure that a firmer conclusion could be drawn.

Questions 1, 2, and 3 were often covered in the introductory stages of the interview, when the participant is invited to give a brief description of their work. In future studies, interviewers should feel free to skip questions that have already been covered. This licence should be tempered by the awareness of the requirement to cover all the principles in the course of the interview, and so follow up questions relating to principles that were missed, or mentioned in insufficient detail, are crucial. A revised interview script recommended for use in future studies is available in Appendix II.

Discussion

Although this is a pilot study with a small number of participants, and therefore a limited scope, the experiences that participants shared are nonetheless illuminating. The perceptions of academics, a group that can be expected to be highly intelligent and highly engaged, can tell us about how Australian PSI is being presented to the Australian public, and whether the aims of open government and the principles on open PSI are being effectively communicated to the people they are intended for. The fact that all participants agreed that the accessibility and useability of Australian PSI has improved dramatically over the past 5 years is a strong indication that the efforts of the Australian Government towards open PSI have not gone to waste.

Comparisons between accessibility of PSI in Australia and in other countries are intriguing. It is clear that in some areas, especially in the legal sector, Australia is a world leader and a model for other countries. However, in other areas, such as the sciences, Australia is not at the forefront. American organisations such as NASA and the United States Geological Service have a longstanding history of providing free online access to their datasets, which are often fully downloadable (Sweetkind-Singer & Williams 2001).

The difference between those areas where open access to PSI is effectively a default option, and those areas where it is not, seems to be culture. In the Australian legal sector, the prevailing cultural mores appear to strongly support open access to PSI as an essential pre-requisite for justice and an ethical and professional obligation. In other sectors, this deep identification with the importance of open access to PSI does not seem so present. It is likely this understanding of the value and benefit of PSI is a crucial pre-cursor to gaining effective engagement from PSI providers in the project of open access to PSI.

Many of the suggestions regarding improvements from the participants of this study were interventions that are already in process. Data.gov.au, for example, could ultimately fulfil the role of a “one stop shop” for PSI of many different kinds. Data.gov.au also provides access to complete, downloadable datasets. It currently contains more than 1000 such datasets (Data.gov.au 2012).

This could simply be an indication that the interventions mentioned are not yet at the stage of development where they are functional and useful to the participants in this study. Alternately, it could indicate misperceptions or gaps in the participants' knowledge about Australian PSI. These gaps could be addressed through outreach and communication from the PSI providers, in explaining to interested members of the public the developments that are happening, and how such developments could be of value.

Recommendations

Metadata

Guidance for PSI providers on selecting appropriate metadata standards, and understanding the importance of metadata being used correctly and updated in a timely way would be of assistance in ensuring that Australian PSI is as discoverable as possible. There are a wide variety of metadata standards available, and it may not be possible to set a single standard that will work for all kinds of PSI, whether it is legislation or meteorological data. Recommending appropriate metadata standards for consistency across subject areas, and guidelines on metadata use, would be of value.

Reuse Rights

Australian Government policy is that as a default position, PSI should be released under a Creative Commons Attribution (CC BY) license. Given that participants in this study report that some of the PSI they re-use is available only under more restrictive licenses, it would be interesting to investigate this further, examining under what circumstances and why other licenses are used. It may be necessary to provide more guidance to PSI providers on when and how to apply more restrictive licenses to their PSI.

Funding Maintenance

Maintaining quality PSI requires adequate resources. Implementing improvements to the way that PSI is provided also requires resources. Ensuring that maintenance and improvement programs are prioritised and budgeted for is a crucial aspect of supporting open PSI in Australia.

Cultural Support

A culture of Australian PSI management that accepts the value and importance of open access to PSI is a crucial pre-requisite to implementing open access across the whole Australian public sector landscape. The success of open PSI in the legal sector provides a model for cultural changes in other sectors to gain support and understanding of PSI providers on the value and benefit of openness.

Further Research

Integrating the myriad functions of Australian government agencies in order to produce a coherent and standardised body of PSI that is discoverable, useable, transparent and open is a huge undertaking and will take time. A clear

understanding of the needs and contexts of the re-users of PSI is crucial if this goal is ever to be reached. The qualitative methodology proposed in this report provides a pathway towards developing this understanding.

There are two options in the proposed methodology, which could provide two different outcomes. Whether one or both of these options are pursued depends on the strategic preferences of the OAIC, and how they wish to approach the investigation of the re-user experience of PSI.

Option One

Option one is a broadly targeted sampling of a wide variety of academic re-users across a multitude of subject areas, and a wide geographic area. This may require a substantial allocation of time or resources. This option provides a wide overview of the PSI landscape in Australia from the perspective of re-users, with participants reporting on experiences with many different agencies and organisations, in many different subject areas. This wide overview is also likely to be somewhat shallow, in that there will be many agencies and PSI resources represented in the participants' experiences, but each agency or PSI resource may only have 1 or 2 participants reporting on them.

Option Two

Option two is a targeted, or series of targeted, studies involving a specific subject area. This kind of study may be possible to complete in a shorter timeframe or with fewer resources, assuming that someone with inside knowledge can be enlisted to assist in recruiting participants. This option will provide a narrower, but potentially deeper exploration of the PSI landscape in a defined subject area. There will likely be multiple participants who can report on their experiences with the same agencies and PSI resources, providing a deeper and more representative view of the state of play in that subject area. One advantage of this approach is that it may be possible to enlist the support of a particular organisation who is keen to improve their performance in the provision of open PSI, as the re-user study could identify where and how to target interventions which will have the most impact.

References

Attorney-General's Department 2012, *Australian Government Intellectual Property Manual*, Australian Government.

Bryman, A. 2008, *Social Research Methods*, 3rd edn, Oxford University Press, Oxford UK.

Creative Commons n.d. *About the Licenses* Accessed 3 June 2012
<creativecommons.org/licenses/>

Data.gov.au 2012, viewed 31 May 2012 <data.gov.au>

Department of Finance 2010, Declaration of Open Government, viewed 21 March 2012, <<http://www.finance.gov.au/e-government/strategy-and-governance/gov2/declaration-of-open-government.html>>

Government 2.0 Taskforce 2009, *Engage: Getting on with Government 2.0*, Government 2.0 Taskforce.

Office of the Australian Information Commissioner 2011a, *Understanding the value of public sector information in Australia* OAIC

Office of the Australian Information Commissioner 2011b, *Principles on open public sector information* OAIC

Sweetkind-Singer, J. & Williams, M. 2001, 'Supporting the Information Needs of GIS Users in an Academic Libraries', *Science & Technology Libraries*, vol. 21, no. 3-4.

Wilson, T.D. 2000, 'Recent trends in user studies: action research and qualitative methods', *Information Research*, vol. 5, no. 3.

Appendix I: Interview Questions for the Pilot Study

The semi-structured qualitative interview methodology chosen for this project requires that the interview questions be open-ended and as neutrally positioned as possible. The interviewer can then further explore the participant's initial responses through follow up questions. Follow up questions also provide the opportunity to cover topics of particular interest to the study that have not come up in the course of the interview, without unduly directing the initial responses.

The Relevant Principles

Academic re-users of PSI may reasonably be expected to have relevant experiences and opinions on 6 out of the 8 principles on open PSI. They are:

- Principle 1 – Open access to information – a default position
- Principle 2 – Engaging the community
- Principle 5 – Discoverable and useable information
- Principle 6 – Clear re-use rights
- Principle 7 – Appropriate charging for access
- Principle 8 – Transparent enquiry and complaints process

Additionally, there are 2 other aspects the re-user's experience of open PSI that must be explored. They are:

- Changes to the accessibility of PSI over the last 10 years
- Suggestions for improvements to the provision of PSI

Given the open ended nature of questions in a semi-structured interview, questions may be expected to speak to more than one of the principles.

Proposed Questions

Introductory remarks:

As you are aware, I'm doing this research for the OAIC on Public Sector Information and its use in academia.

I understand you work for [institution] and you do research in [field/subject area]?
Could you tell me a little bit about your work?

1. How long have you been using PSI? [background]
2. What PSI do you use? [background, principle 1]
3. How do you use your PSI? [background, principle 5]
4. How do you usually access the PSI that you use? [principle 1, 5]
5. Is there PSI you are interested in, but don't use? Why?
[principle 1, 2, 5, 6, 7]

6. How did you find the PSI you use now? [principle 5]
7. Once you find the PSI, do you do anything to the PSI so that you can use it?
What do you do? [principle 5]
8. Have you ever had any problems accessing or using your PSI? What did you do? (Can you tell me about a time when you have had difficulty accessing or using PSI? What happened? What did you do?)
[principle 1, 5, 6, 8]
9. Do you ever seek out new PSI? How? Why? [principle 5, 8, 1]
10. Is there any PSI you would like, but cannot find? [principle 5, 2, 8, 7]
11. If you could get the Government to give you exactly the right PSI in exactly the right format, what would that be? [principle 1, 2, 5, general recommendations]
12. Have you noticed a difference in how PSI is made available since you first started using it? [changes]
13. What could be done to make it easier for you to access and use PSI?
[suggestions, principle 5, 2, 7, 8]
14. Do you have any other comments?

Follow up questions will be employed to ensure that all issues of interest are raised.

Appendix II: Revised Interview Questions for Future Studies

Interview questions must be open-ended and as neutrally positioned as possible. The interviewer can further explore the participant's initial responses through follow-up questions. Follow-up questions also provide the opportunity to cover topics of particular interest to the study that have not come up in the course of the interview, without unduly directing the initial responses.

The interviewer should work to build a rapport with the participant. The tone of the interview should be open, friendly, and interested.

The Relevant Principles

Academic re-users of PSI may reasonably be expected to have relevant experiences and opinions on 6 out of the 8 principles on open PSI. They are:

- Principle 1 – Open access to information – a default position
- Principle 2 – Engaging the community
- Principle 5 – Discoverable and useable information
- Principle 6 – Clear re-use rights
- Principle 7 – Appropriate charging for access
- Principle 8 – Transparent enquiry and complaints process

Interviewers should ensure they have a deep and clear understanding of the meaning and implications of each of these principles, in order to be able to ask relevant and meaningful follow-up questions.

Additionally, there are 2 other aspects the re-user's experience of open PSI that must be explored. They are:

- Changes to the accessibility of PSI over the last 5 years
- Suggestions for improvements to the provision of PSI

Given the open ended nature of questions in a semi-structured interview, questions may be expected to speak to more than one of the principles.

Questions

Introductory remarks:

As you are aware, I'm doing this research for the OAIC on Public Sector Information and its use in academia.

I understand you work for [institution] and you do research in [field/subject area]?
Could you tell me a little bit about your work?

1. How long have you been using PSI? [background]
2. What PSI do you use? [background, principle 1]

3. How do you use your PSI? [background, principle 5]
4. How do you usually access the PSI that you use? [principle 1, 5]
5. Is there PSI you are interested in, but don't use? Why?
[principle 1, 2, 5, 6, 7]
6. How did you find the PSI you use now? [principle 5]
7. Once you find the PSI, do you do anything to the PSI so that you can use it?
What do you do? [principle 5]
8. Can you tell me about a time when you have had difficulty accessing or using
PSI? What happened? What did you do?
[principle 1, 5, 6, 8]
9. Have you ever been asked by data custodians what PSI you would like, or
how you would like it?
[principle 2]
10. Have you ever had to make a formal enquiry or complaint with a PSI
provider?
[principle 8]
11. Do you ever seek out new PSI? How? Why? [principle 5, 8, 1]
12. What is your dream PSI? If you could have any dataset or information, what
would it be? [principle 1, 2, 5, general
recommendations]
13. Have you noticed a difference in how PSI is made available since you first
started using it? [changes]
14. What could be done to make it easier for you to access and use PSI?
[suggestions, principle 5,
2, 7, 8]
15. Do you have any other comments?

Follow up questions will be employed to ensure that all issues of interest are raised.

Appendix III: Principles on open PSI

[Copied from Office of the Australian Information Commissioner 2011, *Principles on open public sector information* OAIC. Original available at http://www.oaic.gov.au/publications/reports/Principles_open_public_sector_info_report_may2011.html#_Toc293927723. Accessed 31/5/2012]

The Principles on open PSI are non-binding and do not override other legal obligations on agencies. Agencies should have regard to relevant legislation, including (but not limited to) the *Privacy Act 1988*, the *Archives Act 1983* and the *Freedom of Information Act 1982*.

Principle 1: Open access to information - a default position

Information held by Australian Government agencies is a valuable national resource. If there is no legal need to protect the information it should be open to public access. Information publication enhances public access. Agencies should use information technology to disseminate public sector information, applying a presumption of openness and adopting a proactive publication stance.

Principle 2: Engaging the community

Australian Government policy requires agencies to engage the community online in policy design and service delivery. This should apply to agency information publication practices. Agencies should:

- consult the community in deciding what information to publish and about agency publication practices
- welcome community feedback about the quality, completeness, usefulness and accuracy of published information
- respond promptly to comments received from the community and to requests for information
- employ Web 2.0 tools to support community consultation.

Principle 3: Effective information governance

Australian Government agencies should manage information as a core strategic asset. A senior executive 'information champion' or knowledge officer in the agency should be responsible for information management and governance, including:

- providing leadership on agency compliance with the Information Publication Scheme and Disclosure Log
- ensuring agency compliance with legislative and policy requirements on information management and publication

- managing agency information to ensure its integrity, security and accessibility
- instigating strategic planning on information resource management
- ensuring community consultation on agency information policy and publication practices.

The senior officer should be supported by an information governance body that may include people from outside the agency.

Principle 4: Robust information asset management

Effective information management requires agencies to:

- maintain an asset inventory or register of the agency's information
- identify the custodian of each information holding and the responsibilities of that officer
- train staff in information management
- establish clear procedures and lines of authority for decisions on information publication and release
- decide if information should be prepared for publication at the time it is created and the form of publication
- document known limitations on data quality
- identify data that must be managed in accordance with legislative and legal requirements, including requirements relating to data security and protection of personal information, intellectual property, business confidentiality and legal professional privilege
- protect information against inappropriate or unauthorised use, access or disclosure
- preserve information for an appropriate period of time based on sound archival practices.

Principle 5: Discoverable and useable information

The economic and social value of public sector information can be enhanced by publication and information sharing. This requires that information can easily be discovered and used by the community and other stakeholders. To support this objective agencies should:

- publish an up to date information asset register
- ensure that information published online is in an open and standards-based format and is machine-readable

- attach high quality metadata to information so that it can be easily located and linked to similar information using standard web search applications
- publish information in accordance with the *Web Content Accessibility Guidelines version 2* (WCAG 2.0) endorsed by the Australian Government in November 2009.

Principle 6: Clear reuse rights

The economic and social value of public sector information is enhanced when it is made available for reuse on open licensing terms. The *Guidelines on Licensing Public Sector Information for Australian Government Agencies* require agencies to decide licensing conditions when publishing information online. The default condition should be the Creative Commons BY standard, as recommended in the *Intellectual Property Principles for Australian Government Agencies*, that apply to agencies subject to the *Financial and Management Accountability Act 1997*. Additional guidance on selecting an appropriate licence is given in the *Australian Government Open Access and Licensing Framework* (AUSGOAL).

Principle 7: Appropriate charging for access

The FOI Act requires agencies to facilitate public access to information at the lowest reasonable cost. This Principle applies when information is provided upon request or is published by an agency. Other Acts also authorise charges for specific documents or information access.

Agencies can reduce the cost of public access by publishing information online, especially information that is routinely sought by the public. Charges that may be imposed by an agency for providing access should be clearly explained in an agency policy that is published and regularly reviewed.

Principle 8: Transparent enquiry and complaints processes

Agency decision making about information publication should be transparent. This can be supported, within the agency's information governance framework, by an enquiry and complaints procedure for the public to raise issues about agency publication and access decisions. The procedure should be published, explain how enquiries and complaints will be handled, set timeframes for responding, identify possible remedies and complaint outcomes, and require that written reasons be provided in complaint resolution.