

Report

Summary from University of Sydney Data Management Planning survey

The survey was opened on Sept 29, 2016 and closed on Oct 21, 2016. 115 responses were received from institutions in Australia, New Zealand, Asia, North America and Europe.

The aim of this survey was to gather information about Data Management Plans (DMPs) from other institutions to inform the development of a new data management planning tool at the University of Sydney.

Of the respondents, 93 responses (81%) have some form of DMP in use at their institution. As we were primarily interested in what was happening in places with DMPs, we didn't ask any follow-up questions of those who responded "No" to this question. The only question that was mandatory was the first question (Does your institution have any kind of method for creating Data Management Plans (DMPs)?) so the number of responses to each question varies substantially.

1. Tool/systems used

Q2: Does your institution have a system or online tool for creating DMPs, or is it a document based DMP?

Q4: For your DMP system or online tool, what platform do you use?

Q29: Demographic information: In which country is your institution based?

Of the 93 respondents who indicated that their institution does have a method for creating DMPs, 85 respondents provided information on what kind of DMP was in use at their institution (Fig. 1). A majority of responding institutions are using, or pointing to, some sort of system or online tool for their researchers to complete. However, a significant number of institutions (18 respondents) only provide document based DMPs (e.g. PDF or Word document forms), and 11 respondents indicated that researchers at their institution can choose between completing a DMP as a form or system/online tool. Some of the respondents indicated that although their institutions currently used document based plans, they had system based or online tools in development, so we can expect that in the next couple of years the ratios will shift further towards systems and online tools as the dominant DMP form.

What kind of DMP is used at your institution?

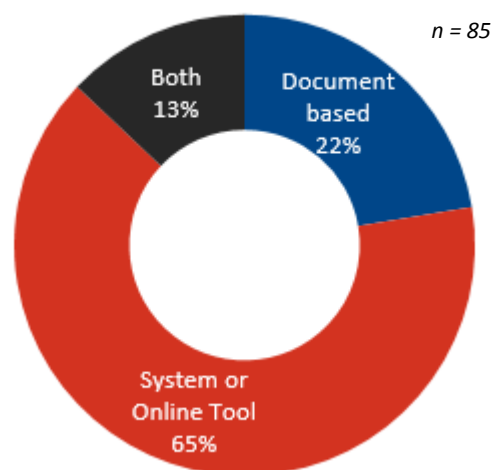


Figure 1. Breakdown of the type of data management plan (DMP) in use at responding institutions.

The geographical distribution of DMP use provides an interesting overview of the patterns present in where various tools and systems are being employed (Fig. 2). DMPOnline, or customised instances of it, predominates in the United Kingdom and Canada (which has a national customised instance as part of the Portage network). DMPTool, or customised instances of it, predominates in the United States, but was not nominated by any institutions that listed their country and were not in the United States. Four respondents indicated use of DMPTool, but did not provide the country that their institution is

located in, so it cannot be determined that DMPTool use was solely limited to the United States, but it is definitely the dominant location where DMPTool is being used.

Countries where DMPs are mandated as part of funding requirements (i.e. the United Kingdom and the United States) tended to make up a large number of our survey respondents; 19 respondents were from the UK and 13 respondents were from the US. Australia is an exception to this, as formal DMPs are not currently mandated by Australian funding agencies, but we nevertheless received a large number of responses (12) from Australia who had some form of institutional DMP. Australian institutions are using a mix of in-house systems, the Queensland Cyber Infrastructure Foundation's system ReDBox, and document based DMPs.

The online tools DMPOnline and DMPTool seem to be primarily used in countries where DMPs are mandated as part of funding requirements. 87% of responding institutions in the UK and US use either DMPOnline or DMPTool, whereas only 23% of responding institutions from elsewhere in the world used DMPOnline or DMPTool. However, since a significant number of respondents didn't specify the country of their institution or the tool in use at their institution, these results could be quite different given a more complete data set.

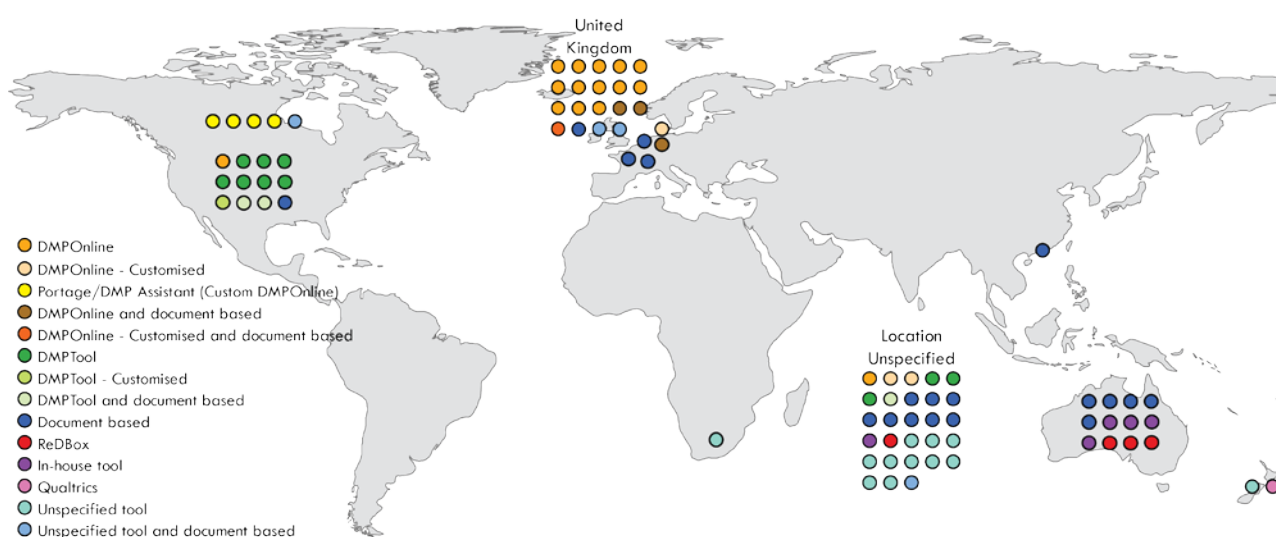


Figure 2. Usage of data management plan (DMP) tools/systems/documents by country. Each point represents a single response.

2. Submission process of DMPs

Q11: Please explain the submission workflow, e.g. How are DMPs submitted? Where/to whom are they submitted? If DMPs aren't submitted, what happens once they have been created?

50 of the respondents described some sort of submission process for their DMPs. The top two places that plans are submitted to involve applying for funding, where the plan is either submitted directly to a funding agency (15) or to an internal unit that reviews plans as part of the funding application process (13). This indicates that the most common reason that plans are being submitted, and therefore the most common purpose of plans, is to fulfil funder requirements. The next most common plan submission was as part of a storage request (5).

3. Updating of DMPs

Q13: Are DMPs continually updated throughout the research lifecycle?

Q14: Please explain the update process, e.g. Who can update the DMP (e.g. anyone on the project, DMP 'owner', CI)? If you have an approval process, how do the updates fit in with the approval process? Are researchers continually engaging with their DMPs?

20 respondents indicated that their plans could be updated, but only a few respondents (4) commented on whether researchers did seem to be updating (2 stated researchers generally not updating, 1 stated there was some evidence of updating, and 1 that level of updating was unknown). One of the respondents who noted that plans were generally not updated stated:

"In general, researchers do not continually engage with the DMP following initial submission, which is generally for purpose of gaining archival storage or to satisfy requirements of postgrad review procedures."

This suggests that incentives or mandates to complete plans may increase the number of plans created, but that the value of these plans as data management aids is limited.

4. Researcher involvement with DMP development

Q26: Were researchers consulted during the development/design/introduction of DMPs at your institution?

Q27: Please describe how/when researchers were consulted during the design/development/implementation of DMPs at your institution.

There were 59 responses to questions about researcher involvement with the development of the DMP tool being used, with 24 respondents providing further information about this involvement (Fig. 3). Researchers were involved at some point in the DMP development process at 28 of the responding institutions, and were not involved at any point during the development process at 19 of the responding institutions. 12 respondents were unsure if researchers had been involved, likely indicating that these respondents had not themselves been involved in the DMP development process at their current institution. These results indicate that it is not uncommon for researchers to be omitted from the development process, and that researcher requirements may not be driving forces behind DMP development.

The most common form of researcher involvement was to provide feedback after reviewing DMP templates or testing a DMP system, which was indicated to have taken place at 50% of the responding institutions (12 respondents). Only four of the twelve respondents who indicated that researchers provided feedback on an existing template or system also indicated that researchers were involved in another manner in the development process. This indicates that at 30% of responding institutions where researchers were involved in the development process (8 respondents), researchers were only involved in the process after an initial version of the DMP had been created.

How Researchers Were Involved in the Development, Design or Introduction of DMPs

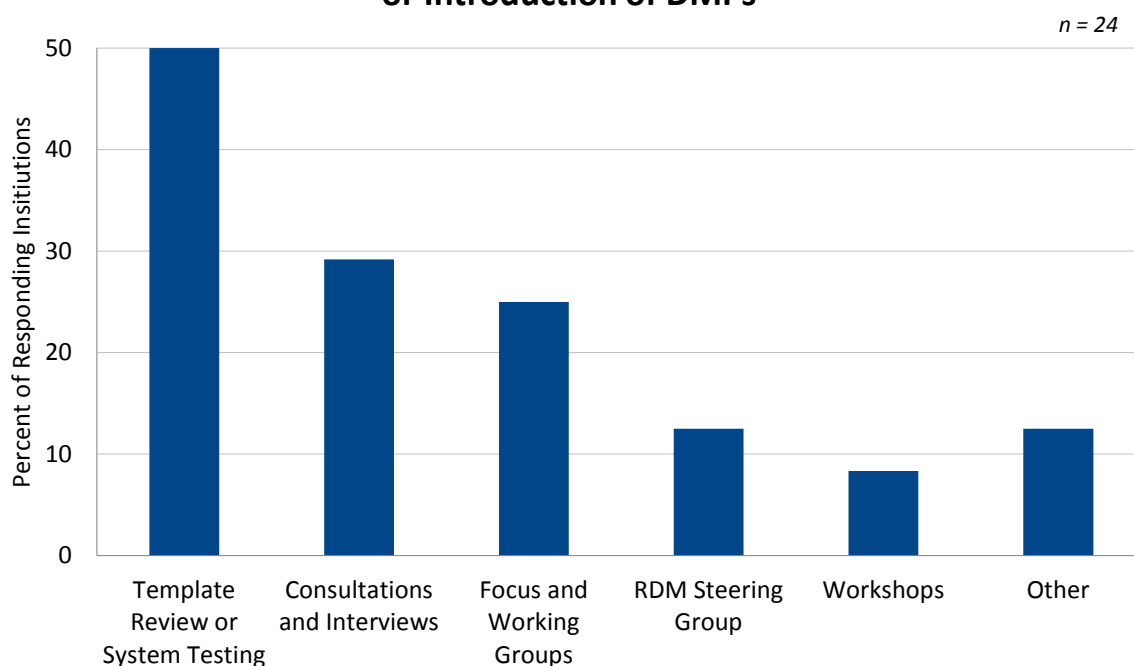


Figure 3. Researcher involvement in data management plan (DMP) development, design or introduction at responding institutions. Note that institutions could have more than one form of researcher involvement. RDM – research data management.

If we include the "no researcher involvement" result from the previous question (Q26) with the results from this question (Q27) we can see that at 27 institutions researchers have either not been involved with the DMP development process, or were only involved after an initial DMP version had been put together. This indicates that researchers are regularly not involved in the initial requirements gathering stage of DMP development, raising the possibility that many DMPs might not adequately address researcher concerns and issues.

5. Support available for DMP creation and submission during approval or review

Q15: Do you have an approval or review process?

Q16: Please explain the review process, e.g. Who are the reviewers/approvers? How many approval stages are there in the workflow? What are the reviewers approving? (e.g. completeness, quality, other)? What tools do they have to assess this? Do you have a required lead or turnaround time to approve/review plans? An estimation of how much time the approval/review process takes from initial submission to final approval.

Q17: What support is provided to DMP submitters before and during the approval process (training, help desk support, online help materials) and who provides this support (library, research office, IT, faculty)?

We received only 13 responses describing the support provided to people during the approval or review process (Fig. 4). From these responses, support was mainly provided by the Library (10) with the Research Office as the next most common provider of support at 4 institutions, with half of the Research Office responses stating that the Library was also a provider of support.

The free text answers for this question indicated that support is delivered in more than one way at these institutions demonstrating that most institutions feel that a variety of options are required in order to provide the necessary support to researchers. Almost all of the institutions (11) that

responded to this question indicated that tailored support in the form of a consultation or advice was available to those submitting DMPs, indicating that institutions place importance on being able to provide individualised advice and to respond to researcher concerns, despite the smaller reach and greater time investment inherent in this support method as compared with developing training or resources.

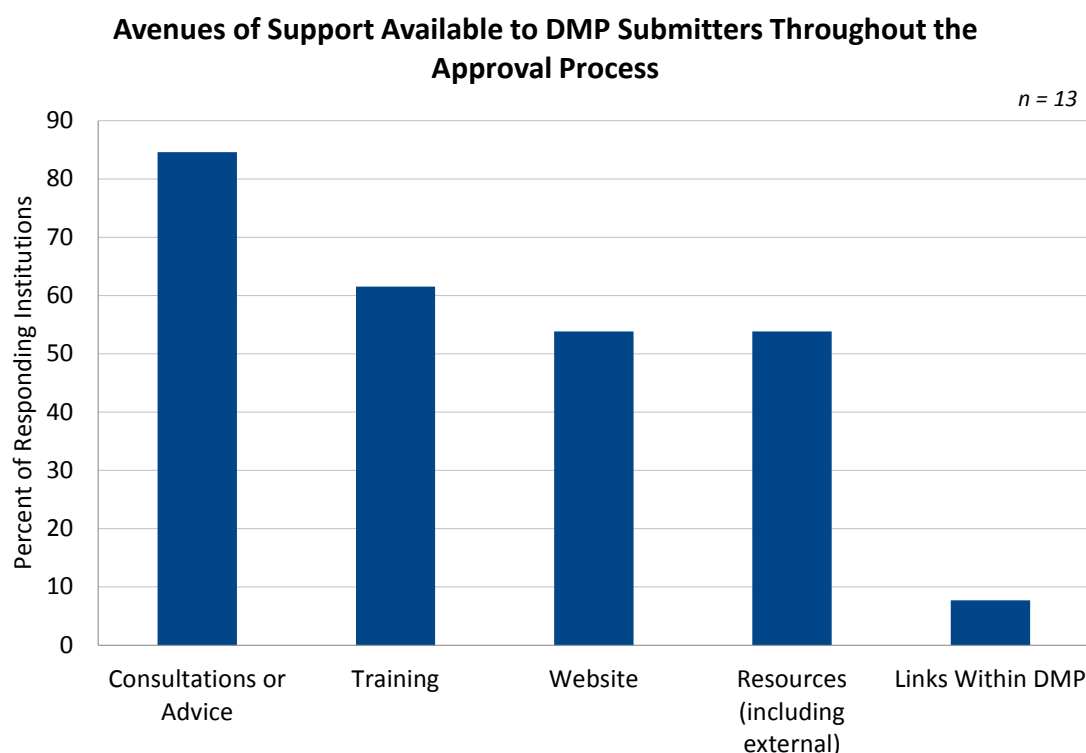


Figure 4. Support available to data management plan (DMP) submitters during DMP approval and review at responding institutions. Note that more than one avenue of support could be nominated by each respondent.

6. Perceived impact and usefulness of DMPs

Q28: Do you feel like DMPs have had an impact at your institution, e.g Have you noticed a change in researcher behaviour or culture since introducing DMPs? Do researchers find the DMP useful?

50 respondents answered questions regarding the impact of DMPs. Just over half of the respondents (26) were unsure as to whether DMPs had produced any impact at their institution. The major reason nominated for this uncertainty was that it was too early to be able to demonstrate impact at this point (18 responses). A number of these responses indicated that the introduction of DMPs at their institution had been fairly recent, or wasn't yet in place institution-wide, only at smaller groups. Some of the respondents also noted that the kind of impact that research data management (RDM) supporters are hoping to have requires cultural change, which will take time to enact. One respondent expressed the belief that *"it will take years for RDM norms to be integrated into good practice as a matter of course. Nevertheless, the DMP is an extremely useful tool for reinforcing those norms."* There was a general expression of the need for more time, advocacy and consultation before much change would be demonstrable.

When describing what kind of impact DMPs have had at an institution (Fig. 5), the most common response was that researchers found having a DMP useful (12 respondents) whereas the second most common response indicated the opposite, that researchers found DMPs an onerous administrative burden (9 respondents). 3 respondents mentioned both of the above in their responses, indicating that researcher responses to DMPs can vary significantly even within a single

institution. A general theme from responses seemed to be that individual researchers who have engaged with the plan and RDM services see value in plans, but that the value of plans for other researchers is limited, and they can often be seen as a burden, rather than a helpful tool.

An interesting case from one respondent indicated that DMPs had particularly been useful at their institution as *"when a faculty was audited by a government agency, having a DMP was important to demonstrate data storage and security concerns were taken seriously."* Although currently only mentioned by one respondent, this function of DMPs could see increasing use as bodies come under pressure to demonstrate and have records of undertaking best practices in research.

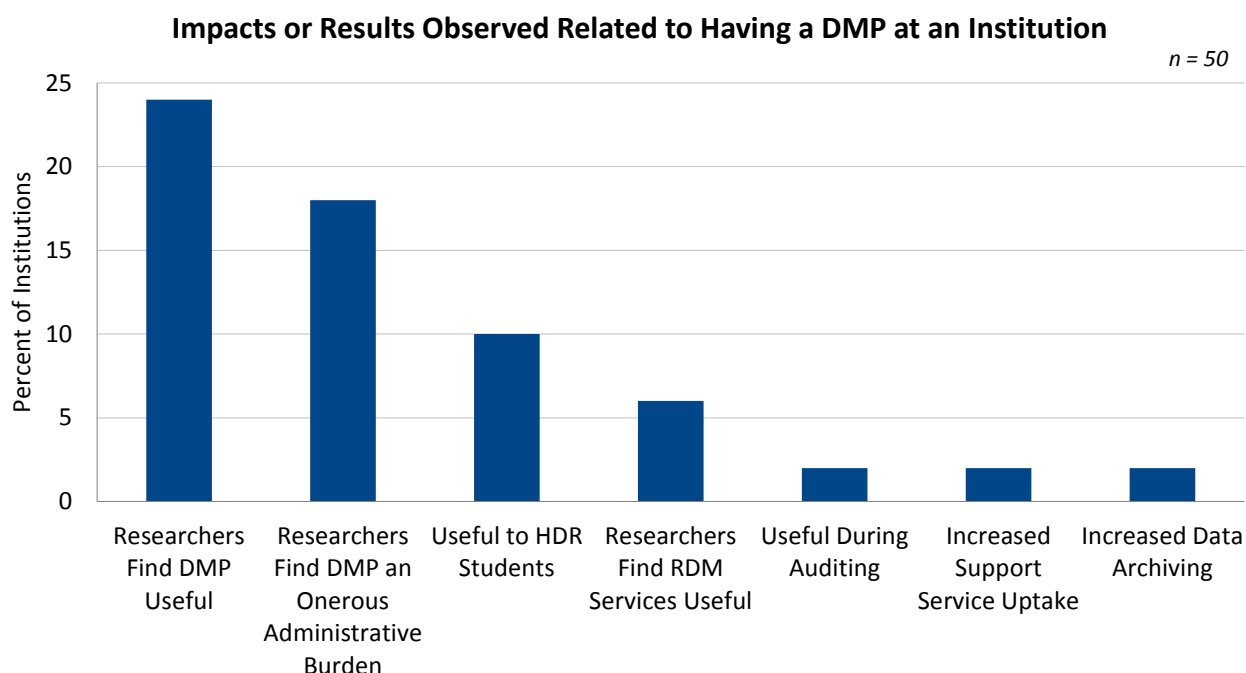


Figure 5. Impacts or results of data management plan (DMP) implementation at responding institutions. Note that more than one impact can be observed at an institution. HDR – higher degree by research; RDM – research data management.

7. Decision making based on DMPs

Q22: Do you do reporting or analysis on DMPs?

Q23: How do you use the information from the reporting/analysis of DMPs (to inform training needs, storage forecasting, planning of services)?

Q24: Can you share any examples of how DMPs have helped administrators make decisions?

In general DMPs are generally not being used to help inform decision-making at most institutions. Only 11 respondents answered this question, and 6 of those respondents indicated that they didn't have any examples of DMPs informing decisions.

Examples that people did provide included using DMPs to highlight and ameliorate storage risks, to plan storage capacity, to provide storage and other project costing advice, to understand and target training needs, and to extract examples that highlight researcher needs. None of these examples had more than 2 respondents mentioning them. DMPs are either generally not useful tools for gaining information for decision making purposes, or are still at too early a stage in their implementation at most institutions to provide the information necessary to facilitate administrators in making decisions.