

LYRASIS Research Report

LYRASIS 2022 Research Information Management Survey Report

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Report Title: LYRASIS 2022 Research Information Management Survey Report

Project Abstract:

The LYRASIS research information management (RIM) survey was conducted in spring/summer 2022 as a mechanism to better understand how institutions interact with and support RIM activities. For the purposes of this survey, research information management (RIM) was defined as the aggregation, curation, and utilization of information about research. This report provides institutions with an opportunity to see where their efforts fall amongst the activities of their peers in four categories: allocation of responsibility for RIM activities, funding RIM activities, RIM compliance, and tools used for completing RIM activities.

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Introduction

Research information management, or RIM, has increasingly become part of the conversation for both academic and non-academic organizations as they create strategies for the aggregation, curation, and utilization of information about research. Organizations increasingly see value in being able to manage, track and report on the impact of research created through their organizations. Some aspects of RIM are mandatory, such as ensuring that grant-funded publications comply with the mandates of the funding organizations. Other aspects, such as tracking publication output by staff or tracking citation output of publications, are self-initiated, and can be used to demonstrate the impact of organizational investments in research.

Libraries are at the epicenter of access to research, whether it is published in traditional venues or available through open access, but they also have a critical role to play in managing information about the research process itself. Interest in RIM activities has grown in the past several years, and significant studies about global RIM activities have begun to emerge. Special attention should be paid to the work produced by OCLC, including the following studies (<https://www.oclc.org/research/publications.rim.html>):

- Research Information Management in the United States, Parts 1 and 2, November 2021
- Social Interoperability in Research Support: Cross-campus Partnerships and the University Research Enterprise, August 2020
- Practices and Patterns in Research Information Management: Findings from a Global Survey, December 2018

These reports present a developing and complex map of the RIM landscape and explore RIM practices, goals, stakeholders, and system components and provide a fundamental foundation for any discussion of RIM.

LYRASIS sought to expand on these influential reports to dive deeper into United States (US) trends, specifically through the lens of LYRASIS membership of North American academic libraries and independent research institutions. LYRASIS is a 501(c)3 non-profit organization whose membership is primarily comprised of academic libraries, with lesser numbers of public libraries, archives, and museums. With these membership demographics in mind, along with its status as the organizational US home/service provider for RIM software and infrastructure programs such as DSpace, VIVO, the ORCID US Community, DataCite, and the LYRASIS DataCite US Community, LYRASIS is uniquely positioned to provide both a vertical and horizontal snapshot of RIM practices. This report is a result of a survey sent to its various member and research communities, with the intention of revealing overarching trends in four key areas.

Based on member input, the survey design focused on understanding a few key aspects of the RIM ecosystem of critical import to LYRASIS at this moment in time.

The largest section of the report is dedicated to understanding how responsibility for RIM activities are distributed across the campus. LYRASIS found that research today does not appear to be solely the purview of the academic library, and responsibilities are often distributed amongst various organizational units across a university campus.

During the survey design phase, LYRASIS focus group members clearly stated their interest in learning if patterns would emerge concerning those who are given responsibility for different areas of RIM activity. In a related section, LYRASIS chose to explore, the tracking and monitoring of compliance for research related activities.

The LYRASIS survey also focused on understanding how RIM activities are funded, both in terms of monetary contributions and staff time. Activities such as tracking researcher output, the adoption of persistent identifiers, and ensuring grant compliance are all relatively new areas for universities and independent research organizations – the results of the survey found that there is still minimal understanding of what areas of university budgets are financially supporting these endeavors.

As the institutional home to several RIM-related software platforms and services, LYRASIS was also interested in understanding which tools organizations are using to achieve their RIM strategic goals.

As part of the Research and Innovation Division, LYRASIS Research generates open access publications intended to provide LYRASIS members and the larger library, archives, museum, and complementary research community with information and reports on an ongoing and regular basis. LYRASIS believes this report will paint a unique portrait of RIM activity in the US, one that will provide both guidance and validation to institutions looking to improve their activities, expand their responsibilities, or bolster their resources.

Executive Summary

The survey respondents reflect the demographic makeup of LYRASIS membership, which is primarily academic libraries. Due to the nature of research information management, the survey was primarily directed at academic institutions, with secondary attention to independent research organizations.

For the purposes of this survey, research information management (RIM) is defined as the aggregation, curation, and utilization of information about research (<https://doi.org/10.25333/C3NK88>). RIM infrastructure relates to any positions, systems or tools that keep track of many different parts of the research process including, but not limited to, grant information, project information, researcher affiliation, researcher roles within projects, research publications and other outputs, and research repositories.

Key takeaways:

- RIM is not yet a strategic priority, (within the United States), with only 35% of respondents confident that RIM is part of their institution's strategic plans.
- For academic institutions, the largest doctoral universities are more likely to have RIM in their strategic plans, albeit still under 50%, with less participation in master's colleges and universities, and little to no participation in baccalaureate and associate colleges.
- RIM activities appear to be spread fairly evenly across three types of entities within the academic university: the library, the office of research, and the provost/chancellor's office.
 - Libraries are more likely to perform duties related to hosting research/pre-prints and datasets, while other units appear more likely monitor grant compliance and researcher impact.
- RIM funding is also split amongst the trifecta of library/office of research/provost's office, although slightly more weight was given to library funding in the survey responses
- Approximately 40% of doctoral university libraries appear to have specifically dedicated RIM budgets, with far lower percentages in masters and baccalaureate/associate colleges and universities.
- The office of research is more likely to track grant compliance than the academic library – 69% of libraries said they do not track grant compliance.
- Libraries are unlikely to provide training on grant compliance, however, a majority of library respondents did say that they assist researchers with their data management plans (DMPs).
- The top five most popular RIM tools/software listed in the survey responses were Web of Science, DMP tool, Scopus, Digital Commons (listed in the survey as BePress), and respondents' home-grown systems.

Methodology

Topic Selection

In October of 2021, the Research and Innovation Division hosted a listening session at the LYRASIS Leaders Forum. Several potential research topics were presented, discussed, and voted on by the LYRASIS Leaders Circle membership. The LYRASIS Leaders Circle is a group of approximately 150 institutions which includes a wide spectrum of institutional types and sizes, this group is considered to be forward looking, or a think tank group of members who are early adopters, 'not content to wait for change to come to them but want to be part of the change'. LYRASIS Leaders Circle members are committed to helping build sustainable programs, services, and solutions by establishing standards, fair pricing and governance that will impact the broader community.

The LYRASIS Leaders Circle selected RIM as the 2022 research topic. Once the topic was chosen, the Research and Innovation division held a focus group in early 2022 with LYRASIS members to narrow the subject areas, and to gather suggestions for questions.

Survey Design

LYRASIS staff designed the survey questions, which were then proofread by a smaller group of volunteer members.

As mentioned in the executive summary, for the purposes of this survey, research information management (RIM) is defined as the aggregation, curation, and utilization of information about research (<https://doi.org/10.25333/C3NK88>). The survey was limited to North American academic libraries and independent research institutions and was divided into four sections: (1) RIM responsibility, (2) RIM funding (3) RIM compliance, and (4) RIM tools.

The questions throughout the survey were a mixture of multiple choice and open-ended questions. A complete list can be found in Appendix A.

Survey Distribution

This survey was conducted between May 23rd and July 15th, 2022. It was distributed via email to all LYRASIS members, via listservs run and maintained by LYRASIS staff, and sent to additional targeted groups within the LYRASIS community including:

lyropen@lyralists.lyrasis.org – This is a semi-public LYRASIS listserv run by the Content and Scholarly Communication Initiatives (CSCI) department which distributes information about new LYRASIS initiatives related to Open Access (OA) content and open infrastructure activities.

lyrleaders@lyralists.lyrasis.org – This is a private LYRASIS listserv that distributes messages to the LYRASIS [Leaders Circle](#) members (this group of approximately 150 institutions represents the highest tier of membership with LYRASIS, and includes a wide spectrum of institutional types and sizes).

The following additional groups were targeted in to obtain a representative group of respondents:

- Current members of the DSpace community
- Current members of the VIVO community

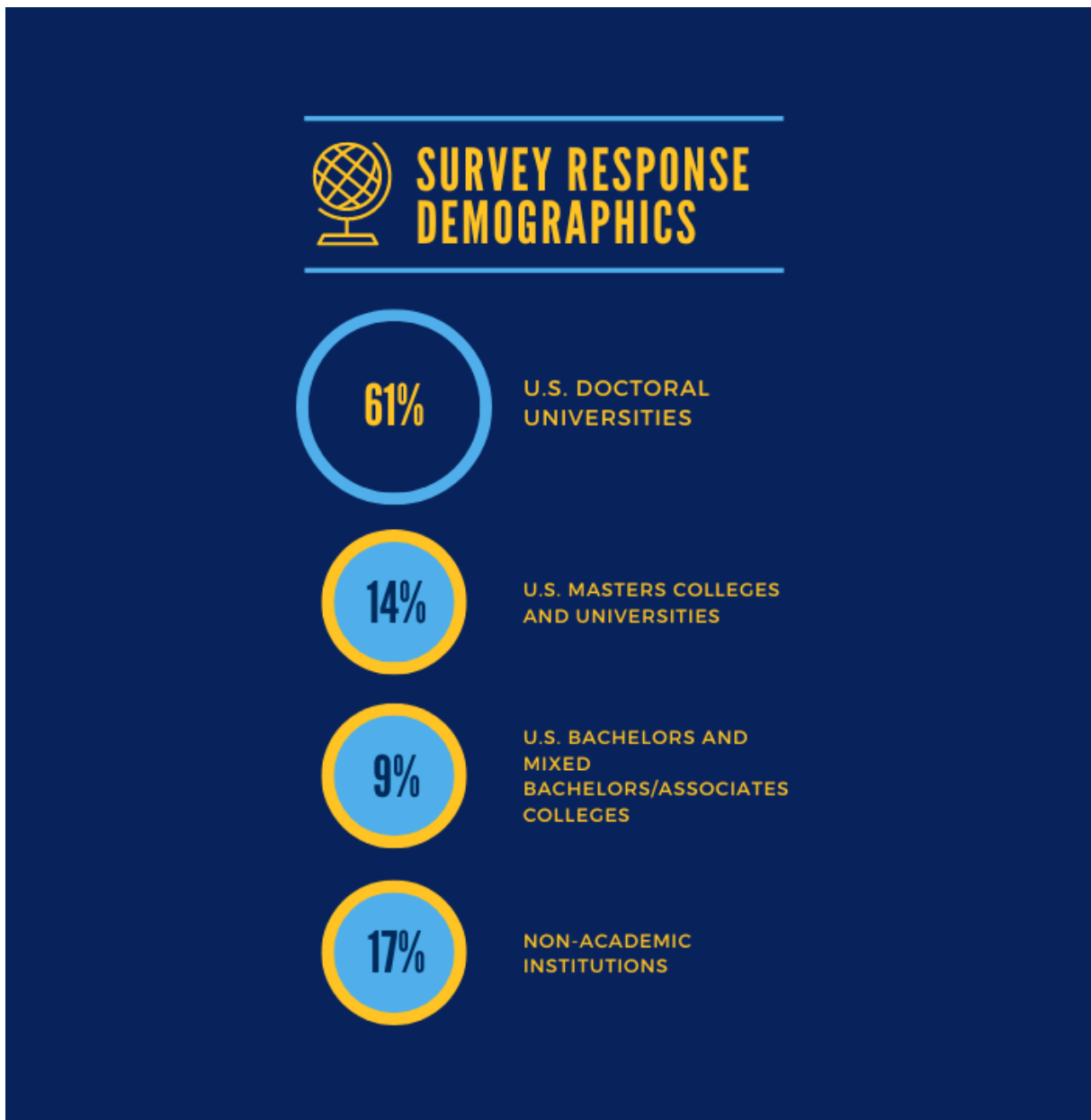
- Current members of the ORCID US Community
- Current members of the LYRASILS DataCite US Community

A Note about Question Design

Many of the questions included an 'Other' option. While these are not in the main report, all 'Other' responses have been included in the complete survey responses in Appendix B.

Survey Results

The survey received eighty-nine (89) total entries. After data clean-up, sixty-six (66) distinct survey responses were used for central analysis. Only one entry per institution was used in the survey results.



The demographic makeup of LYRASIS membership is primarily academic libraries, with lesser numbers of public libraries, galleries, archives, and museums. Therefore, respondents were asked to identify themselves based on Carnegie Classifications within the United States (US), with the possibility of identifying as an academic institution outside of the US, or a non-academic institution such as an independent research organization.

The survey received a fairly concentrated response from American academic institutions, with the majority of responses coming from doctoral universities. The only major group of US academics not represented in this survey is associate colleges. There were no responses from institutions outside of the US.

Non-academic institutions included an independent archives, a public library, a private high school library, two government libraries, and several independent research organizations.

Analysis and Findings

Section 1: RIM Responsibility

This section outlines those who are responsible for various RIM activities within an institution and/or parent organization. The survey used the following terminology:

“Institution” refers to your individual library, archive, museum, or other entity.

“Parent organization” refers to the larger organization under which your institution may fall (example: a university, university system, local or state government, public library system).

Chart 1.

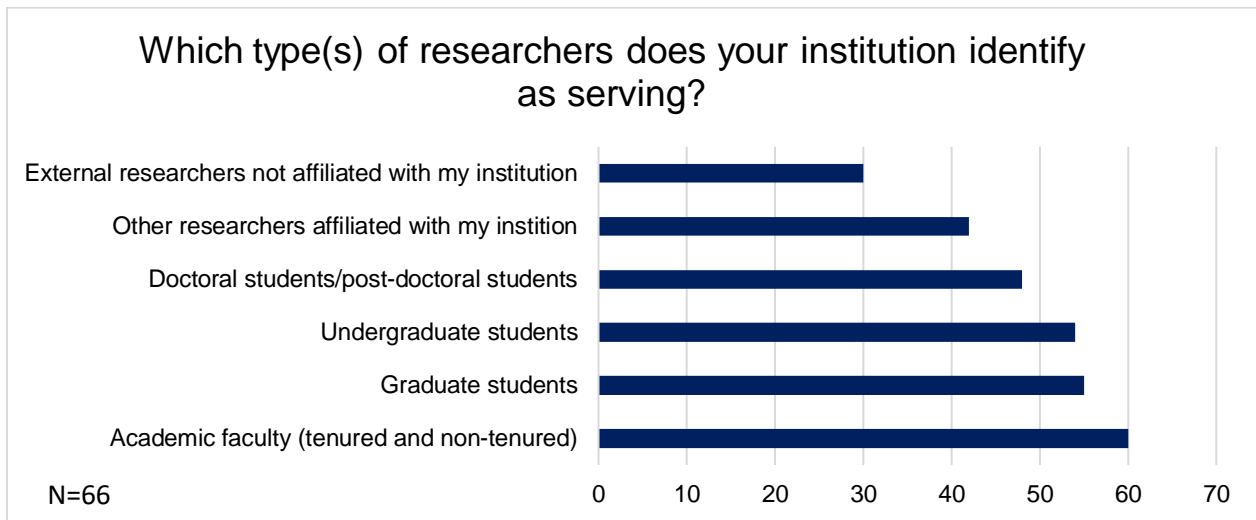
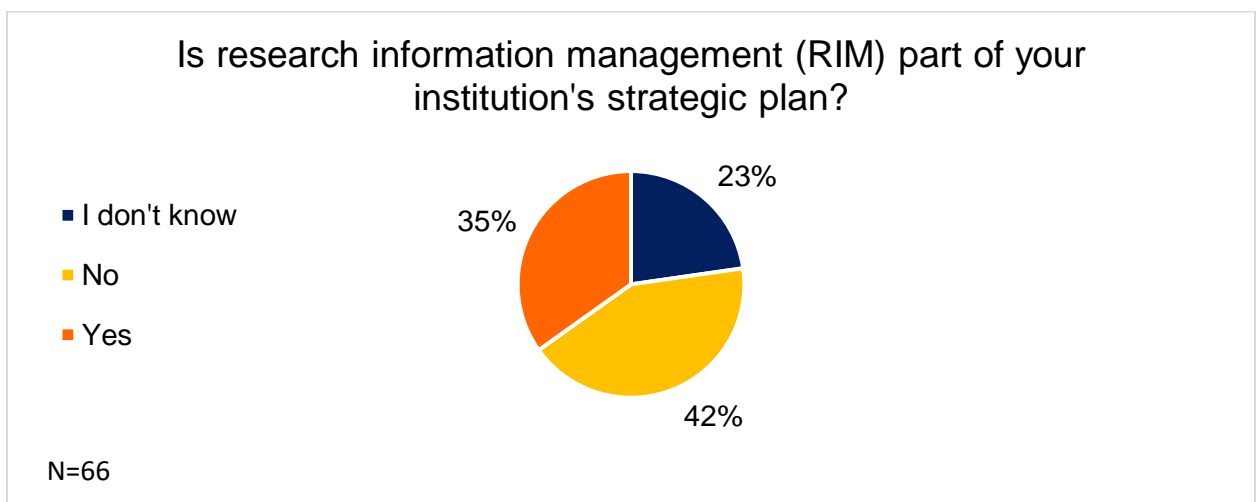
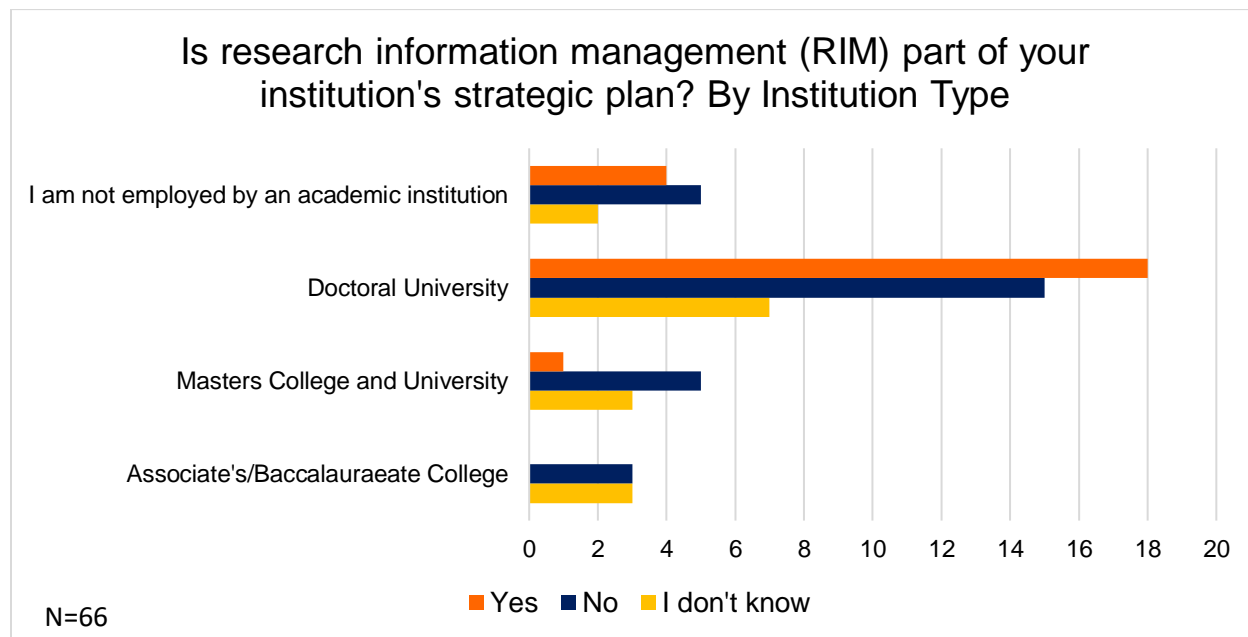


Chart 2.



Based on the survey responses, within the United States, RIM is not universally incorporated into strategic planning, with only 35% of respondents confident that RIM is part of their institution's plans.

Chart 3.



When broken down by institution type, the same holds true. Doctoral universities are most likely to have RIM as part of their strategic plan, with 45% responding Yes, and the non-academic institutions ranking second with approximately 36%. Master's colleges and universities are more inclined to not have RIM in their strategic plans, and of the small associate's/baccalaureate sample in this survey, none of the respondents said that RIM was in their strategic plans.

Chart 4.

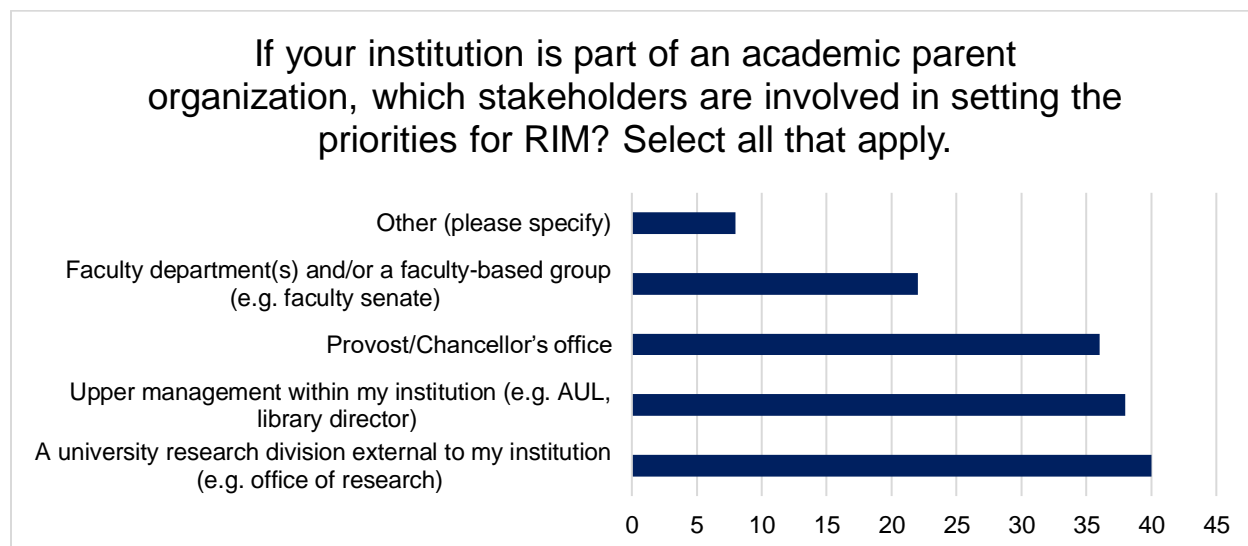
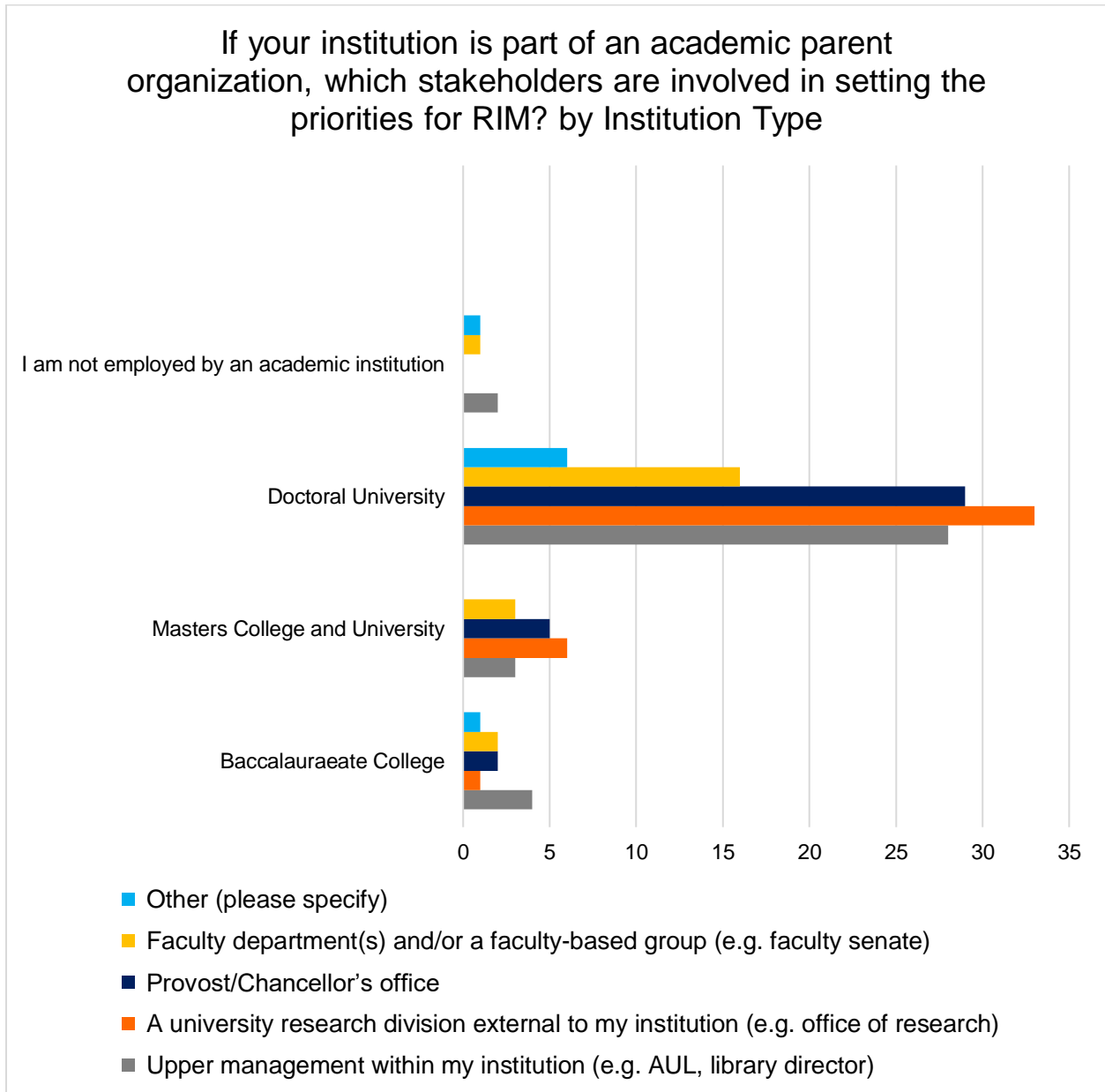
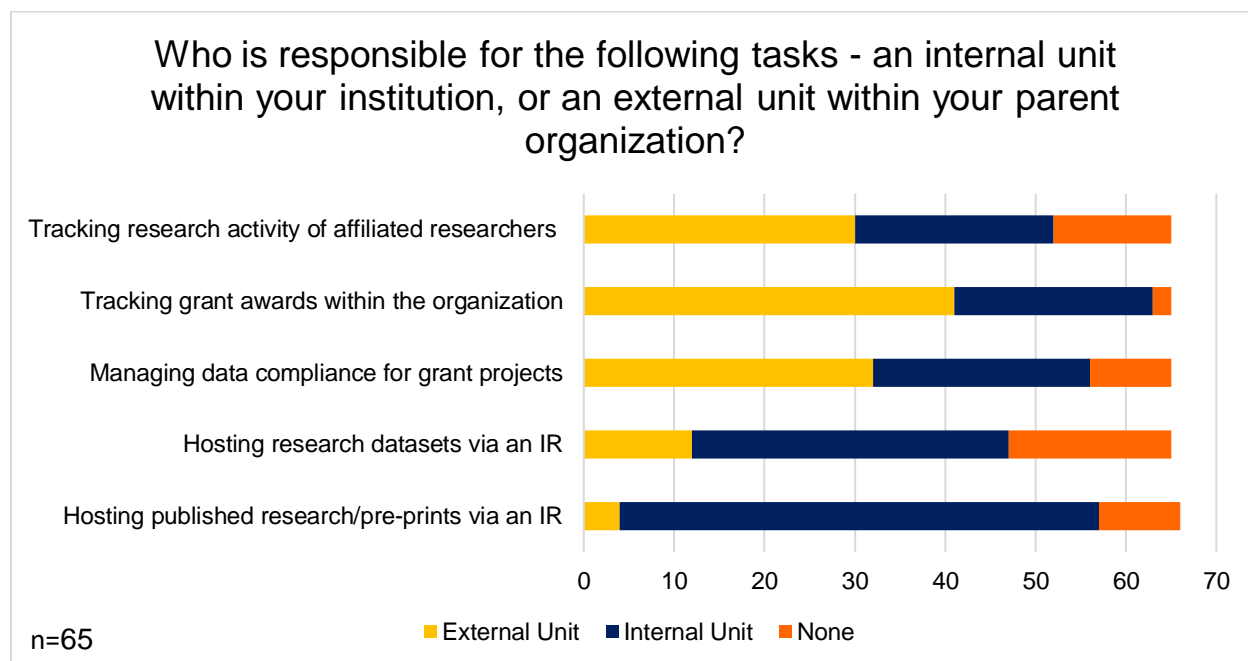


Chart 5.



Looking at the stakeholders within each institution type, the top three categories are still closely clustered together, with a few variations. For the two largest categories (doctoral universities and master's colleges and universities), the external research division holds larger sway, followed by provost's offices and institutional upper management. For Associate/Baccalaureate colleges and non-academic institutions, more respondents said that their own internal upper management was involved in setting priorities.

Chart 6.



For the institutions who participated in this survey, certain activities were clearly designated as more internal versus external. Hosting content in an institutional repository (IR) was more likely to be internal, while grant-related activities were more likely to be handled by external units: 63% of respondents said external units tracked grant awards, and 49% of respondents said external units managed data compliance for grant projects.

Interestingly, 28% of respondents said that no one is responsible for hosting research data sets. When asked if there were other areas of their institution or parent organization that handled any of these responsibilities, respondents provided three responses, two of which were related to hosting data sets:

“There are multiple units that host research data.”

“Hosting research datasets is not centralized--includes both internal and external units.”

These responses may indicate that managing research datasets is an area that lags behind other RIM activities within the North American academic research space.

If you said there are RIM tasks hosted within one or more external units, could you briefly list where those tasks are hosted?

Many respondents answered this question – the majority listed the office of research as a central hub connecting to other smaller offices with specific research tasks:

“Office of Institutional Research, Office of Advancement, University Foundation.”

“Office of Research and Sponsored Projects, University Office of Research, Medical School Office of Research.”

“Office of the Vice President for Research and Innovation. There are also decentralized school and department efforts especially in the area of tracking research activity of affiliated researchers.”

“Office of Planning and Analysis, Office of Research and Economic Development.”

“The University’s Office of Research, specifically Proposal Support Services, is responsible for tracking grant awards and affiliated research activities. The Libraries Department of Research & Scholarship also assists with occasional tracking and reporting on university research activities and researchers.”

Several respondents also see the Provost/Vice Provost office as a centralized hub, connected both internally and externally to various departments handling different research tasks:

“Under the Provosts Office, we have the following: the Office of Institutional Effectiveness, the Grants Administration Office, and Center for Research and Scholarship.”

“Office of the Vice Provost for Research, research admin within the various schools.”

Chart 7.

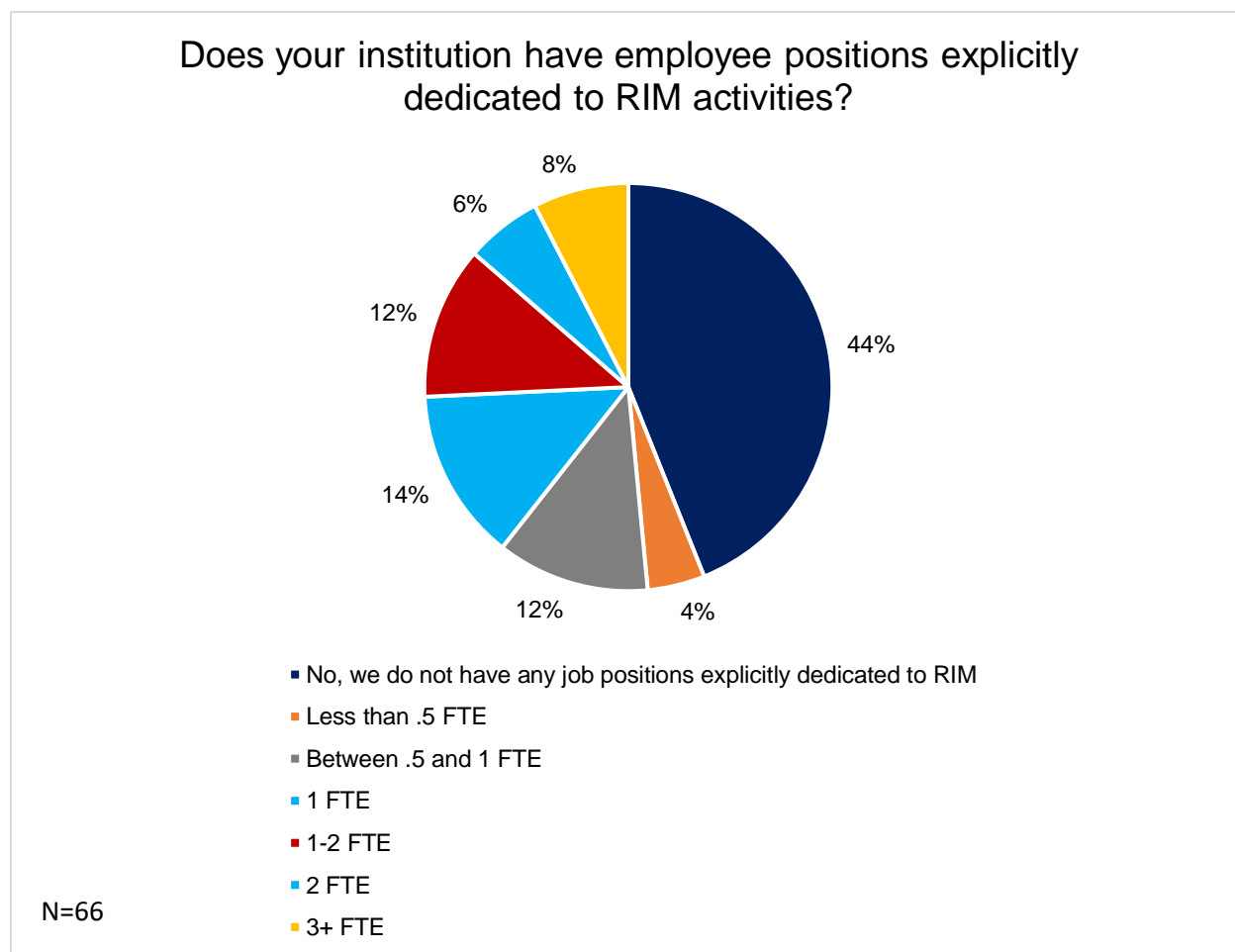


Chart 8.

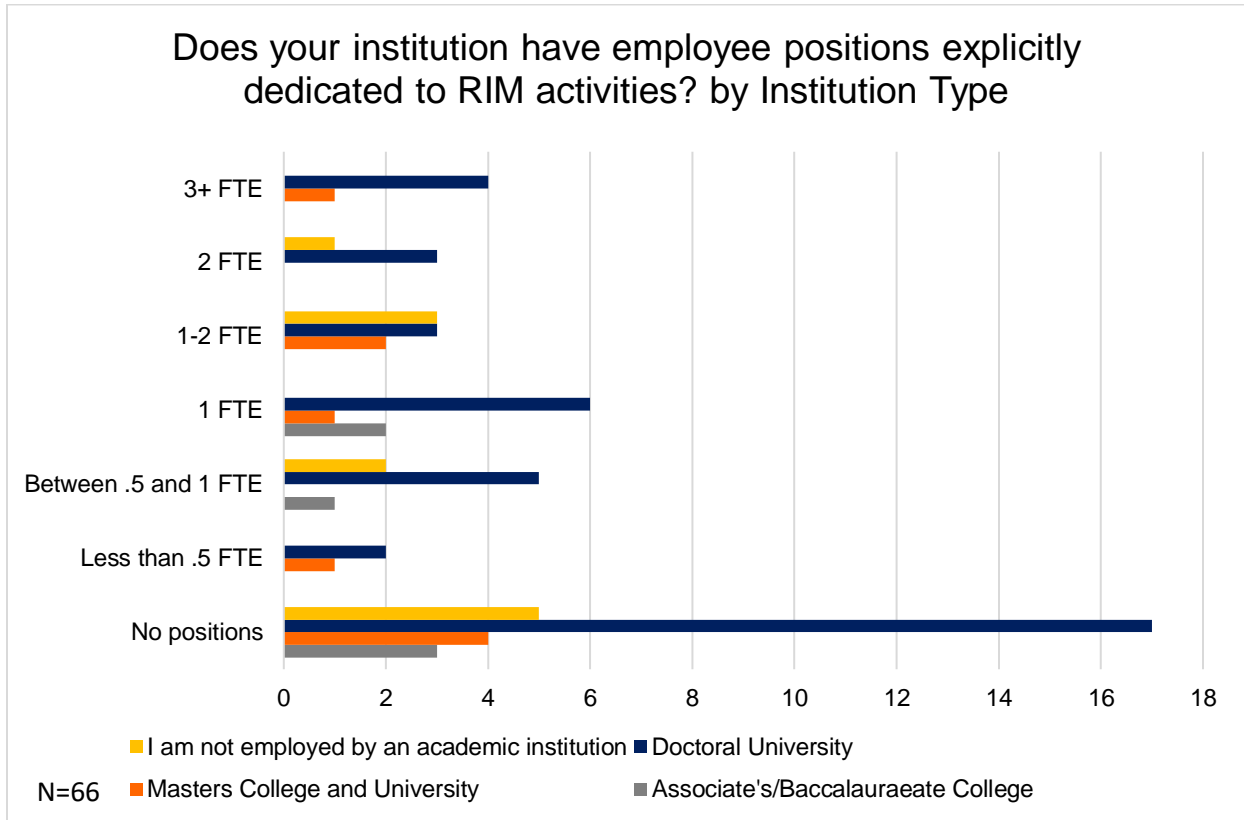


Chart 9.

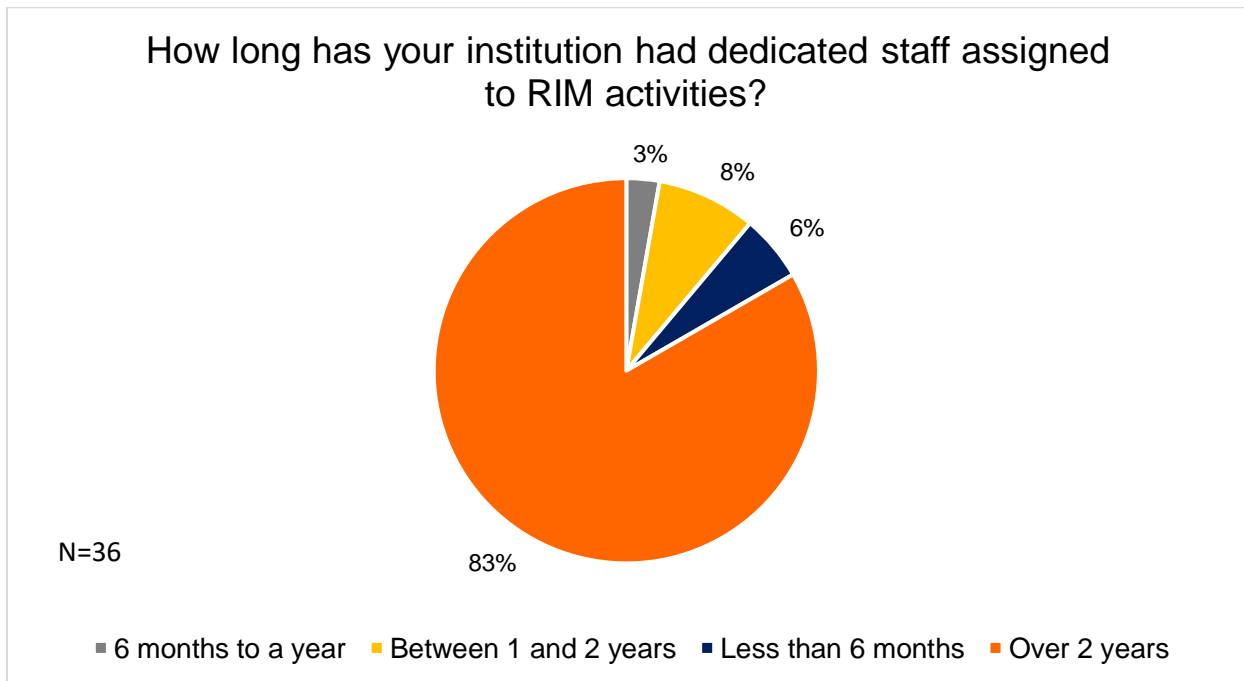
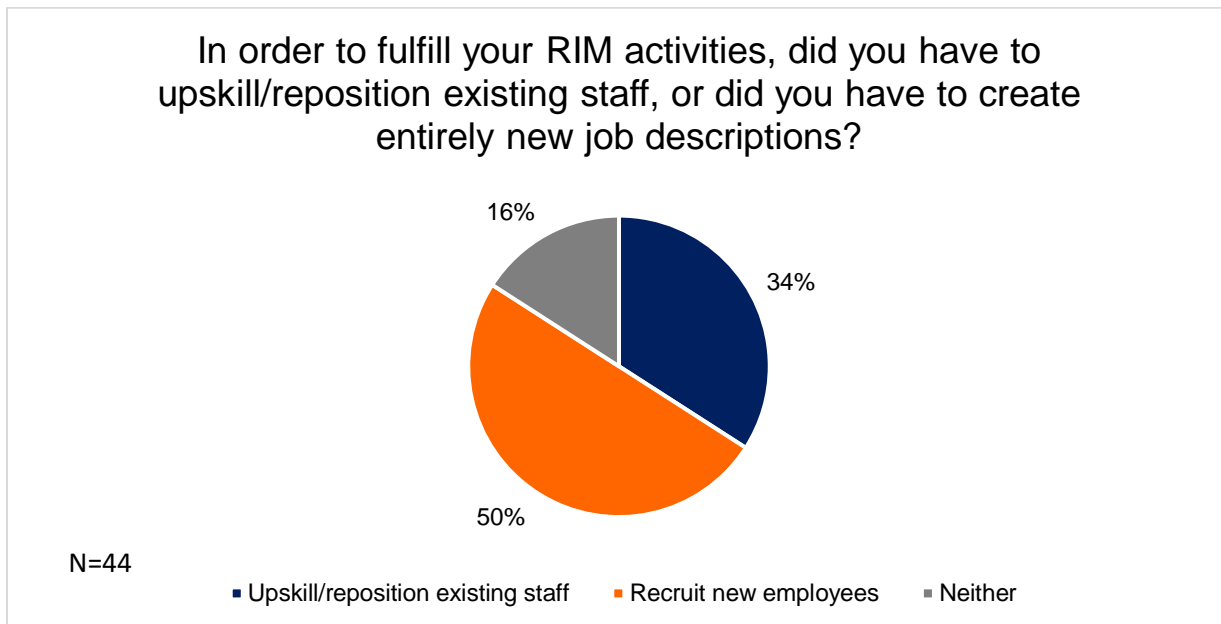


Chart 10.



If your institution had to upskill staff and/or hire new employees, could you share what type of skills/training you consider necessary for RIM work?

The below answers have not been edited. These responses indicate that data management, understanding of the research and data lifecycles, and working with bibliographic or citation-based metadata are common skills for which training is often necessary.

“1:1 training/tutorials, collaborations with colleagues, vendors, and others.”

“Data analytics & visualization, metadata design (ontology), understanding of research lifecycle, communication and soft skills”

“Data Management Plans. This is what we provide internally at this time.”

“Experience with bibliometrics, ORCID, scholarly communication, and researcher profiles/research impact”

“Familiarity with the parts of a citation. Prior experience with databases. Good overall computer skills.”

“In process - keeping clean Excel files, until we purchase an electronic grant management system”

“Knowledge of best practices for: Dublin Core cataloging, project management, testing and learning new data management technologies, staying current and reporting on important trends. Communication, organization, and professional development skills. Experience with database administration, xml, and cross-training.”

“Knowledge of the research data lifecycle, persistent identifiers, industry-standard best data practices, awareness of privacy and security (IS-3) standards and practices”

“Our RIM position is quite narrow in scope: it normalizes and curates bibliographic metadata in a system hosted by Institutional Research. The skills we sought, then, are somewhat those of a cataloger or copy editor.”

“Qualtrics (surveys), CONTENTdm (data and article repository), and tools to analyze data.”

“Research data management best practices, R, Python, DB management, human subjects training, HIPAA training, information security training, domain knowledge, e.g., ecology, health.”

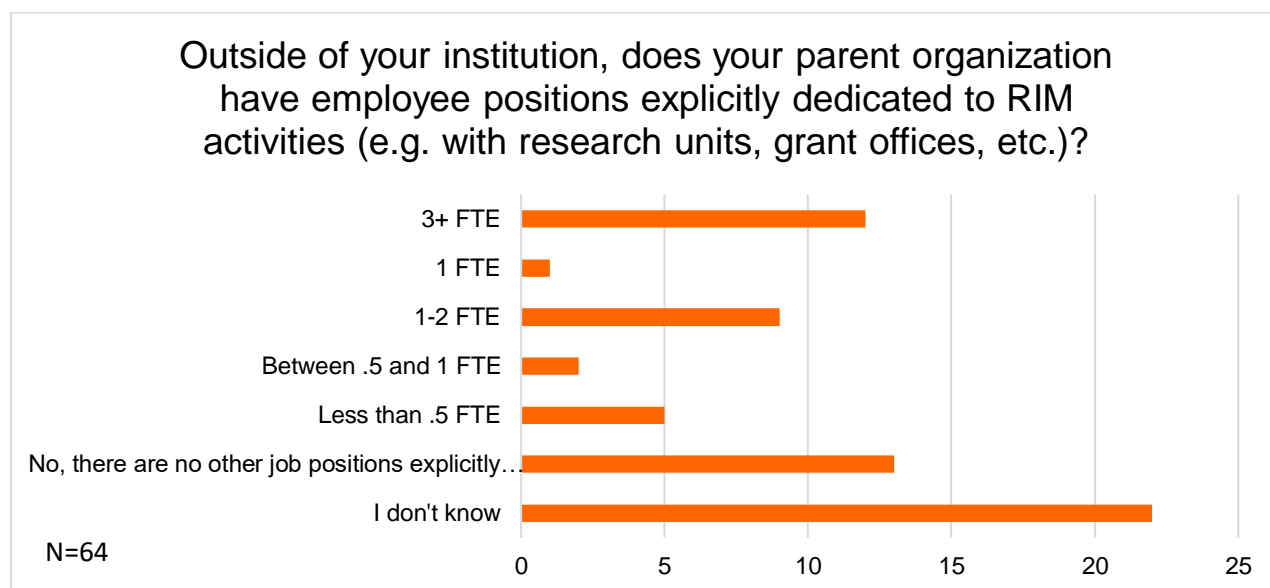
“Research data, grant reporting, understanding of particular research”

“Self-directed training in platform UI.”

“Training on institutional repository; training on author permissions”

“We hired a Digital Initiatives Librarian with some experience in institutional repositories, but she was a new graduate, and we simply chose to provide professional development to help her learn RIM parts of the job. Our repository holds data and all other types of materials. She took a number of classes and learned extensively on the job.”

Chart 11.



This question was designed to determine how many employees across a whole organization (with the primary expectation that respondents would be describing a university system) are dedicated to RIM activities. The responses are admittedly confusing, as they don't necessarily match up with other data collected from the survey. In an earlier question (If your institution is part of an academic parent organization, which stakeholders are involved in setting the priorities for RIM?), the majority of respondents said that they had multiple stakeholders within their wider organization and identified provost offices and offices of research. However, based on the responses to this question, that does not seem to translate to understanding how many staff are

working in those other areas. Furthermore, roughly 34% of respondents to this question admitted they don't know what the staffing is within their parent organization.

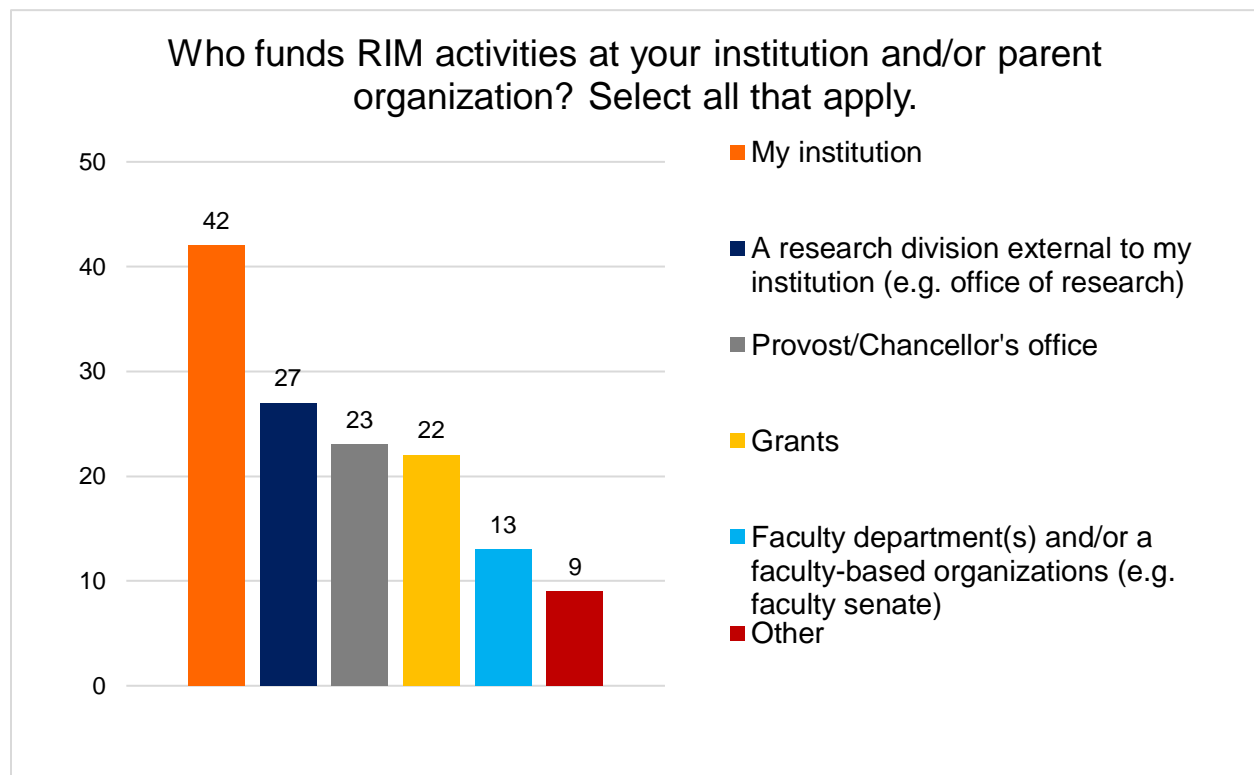
Section 2: RIM Funding

Respondents were asked questions focused on how various RIM activities are funded by an institution and/or parent organization. As in Section 1, above, all survey questions used the following definitions:

“Institution” refers to your individual library, archive, museum, or other entity.

“Parent organization” refers to the larger organization under which your institution may fall (example: a university, university system, local or state government, public library system).

Chart 11.



This question was designed to see how many different and potentially overlapping stakeholders are funding RIM activities. Sixty-three% of respondents said that their institution funds RIM activities, while approximately 30-40% are also seeing overlapping funding from external research divisions, provost offices, and grants. Faculty departments appear least likely to fund RIM activities. Responses under 'Other' leaned more towards elaboration of already identified areas, rather than different areas of the organization:

“Libraries’ budget is funded by Provost office.”

“Office of Faculty Development and Advancement, and, to clarify the selection of “faculty departments,” above, it is in reference to college-specific faculty activity reporting systems (e.g., our college of business pays for an instance of digital measures, which they use instead of the university’s homegrown system).”

“Our RIM system is jointly managed and funded by the Office of Research and the Libraries.”

Chart 12.

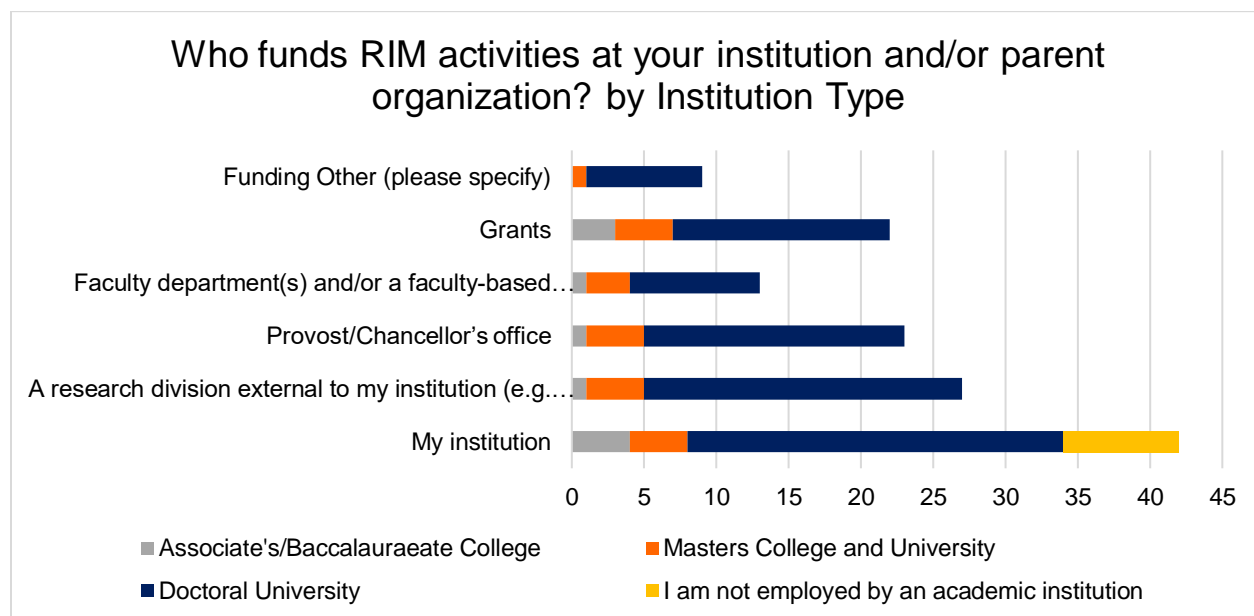
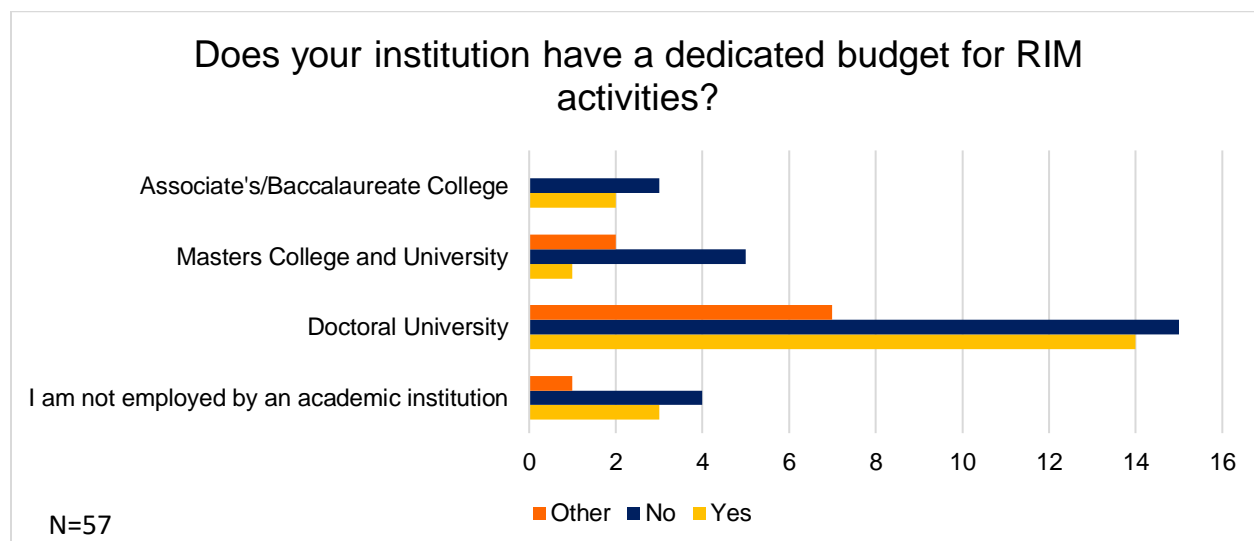


Chart 13.



Under ‘Other’, most respondents said they did not know or did not think so. A few respondents said they did not have a budget for RIM activities as a dedicated area, but either had specific budget allocations for software/services, or noted that RIM activities took place under the aegis of the library:

“Beyond budget allocations for the subscription to our RIM system, Pure, along with user seats, there is no additional budget for system management or RIM related activities. The staff who jointly manage the system do not have RIM responsibilities written into their job descriptions.”

“Not with that terminology, but we do have dedicated funds for ORCID, Datacite, bepress, and librarians responsible for repository and data management.”

“This is incorporated into library spending.”

If not, what part of your institutional budget is used to support RIM activities?

Respondents answered this question in a few different ways. Some people indicated specific amounts of money or staff time:

“\$50,000.”

“About 1/3 of a position.”

“Less than \$100,000 per annum.”

“Cost of the IR and one FTE.”

Others indicated different areas of the institutional (majority academic library) budget, with no overarching theme:

“Budget from IT, libraries and individual research accounts all help fund RIM.”

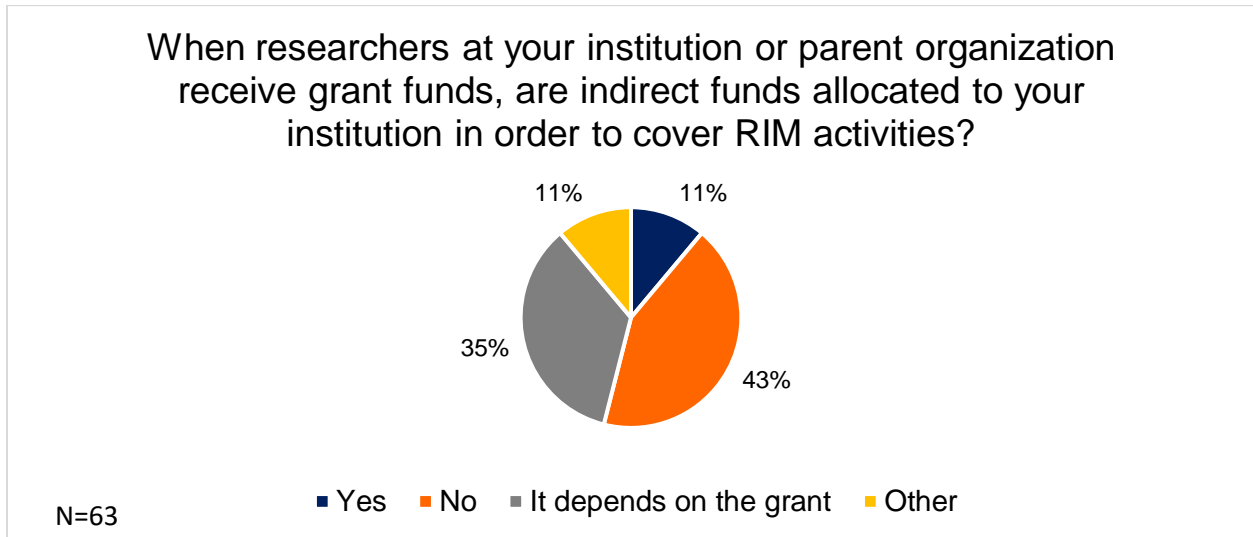
“Electronic resources.”

“From my understanding, RIM activities are covered by Facilities and Administration funds or else the costs are built into grants.”

“Scholarly communications and digital projects.”

“Personnel budget.”

Chart 14.



Section 3: RIM Compliance

Section 3 aimed to understand trends around those responsible for ensuring research compliance with various research mandates, for example, grant funding requirements.

The definitions for “institution” and “parent organization” remained consistent throughout the survey instrument.

Chart 15.

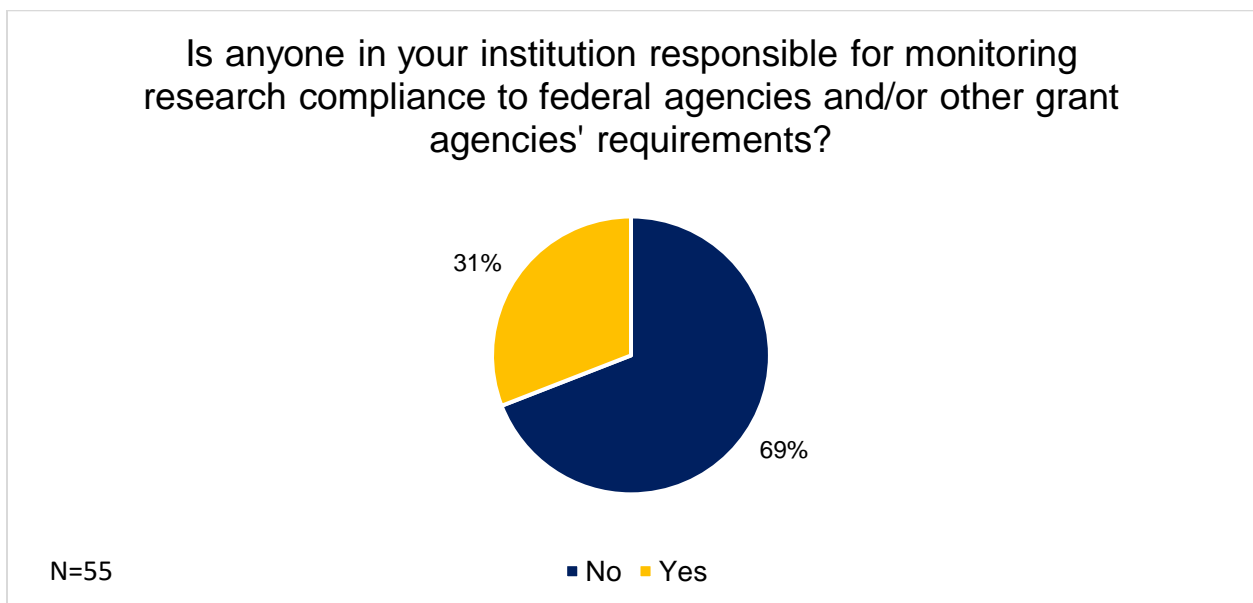
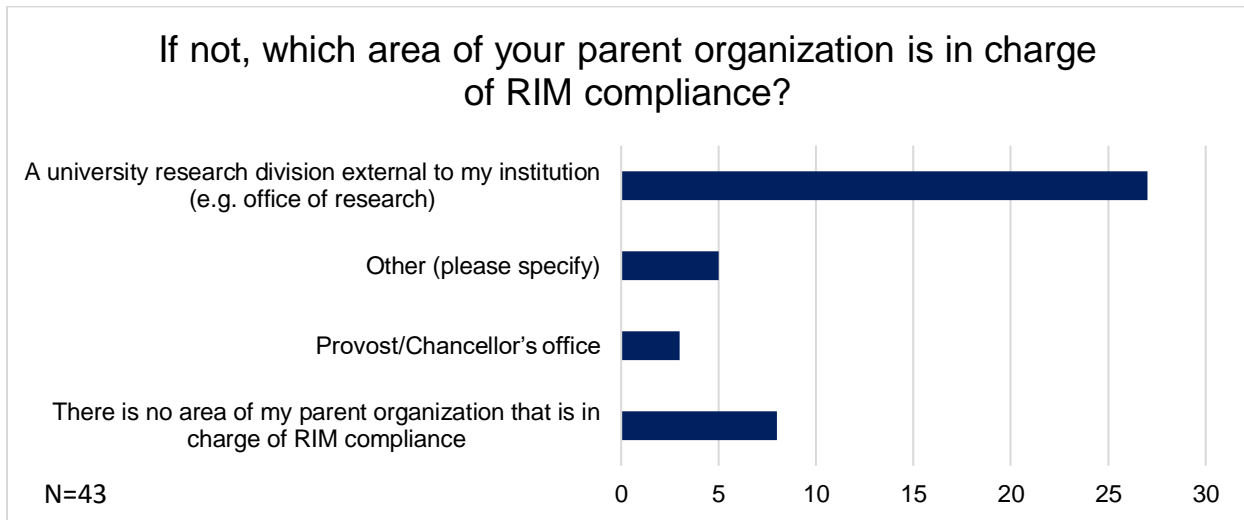


Chart 16.



Under 'Other,' respondents wrote:

"We check compliance on our funded researchers for research outputs produced by AHA funding."

"Compliance office had, now with 2023 mandate research office is trying to establish compliance"

"It's unclear exactly but would likely be the Office of Sponsored Programs"

"Office of Research and Sponsored Projects"

Chart 17.

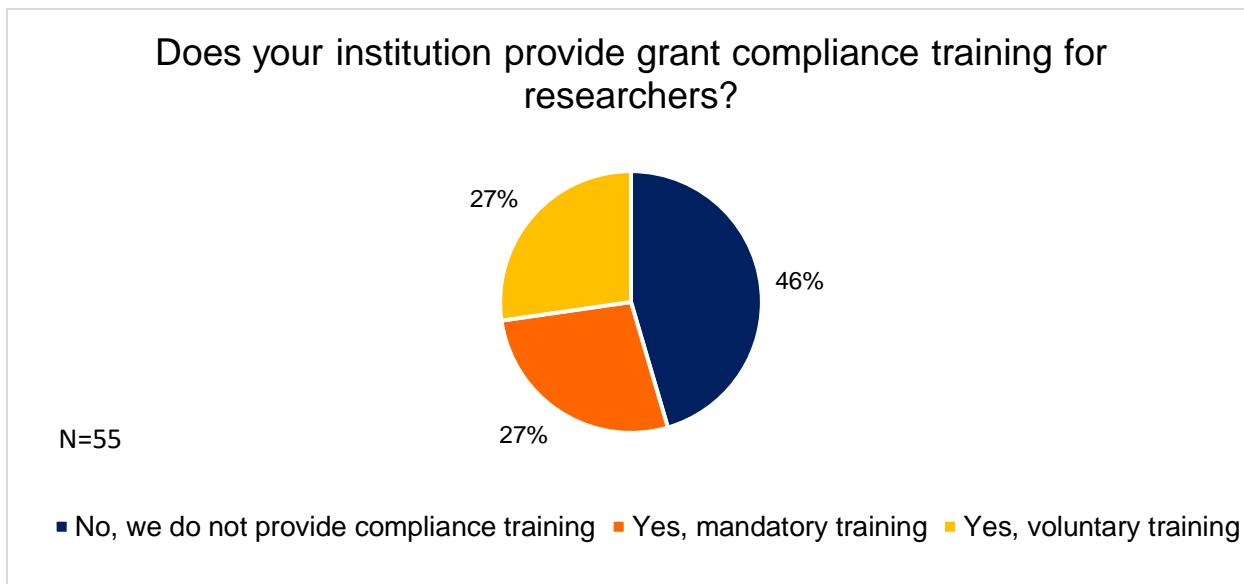
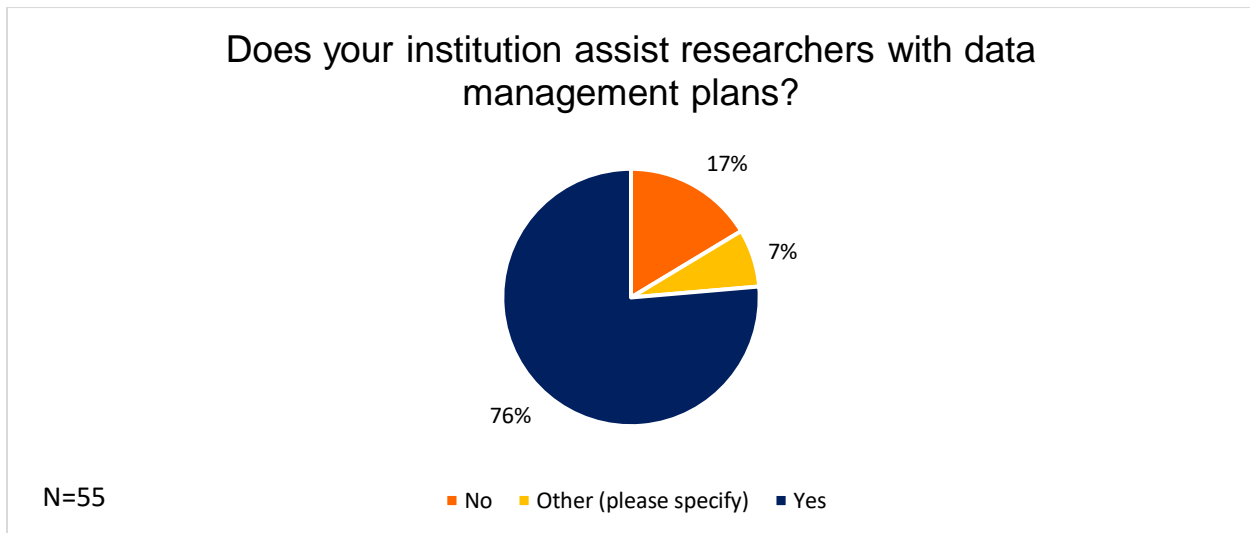


Chart 18.



Under 'Other,' respondents wrote:

"We require data management plans with grant applications. We review them and provide feedback if the plan is not consistent with AHA policy."

"I have heard that the OIR will help if requested if they are available, but we do not normally reach out to them."

"On request."

Section 4: RIM Tools

The final section of the survey focused on identifying the various tools institutions use to perform RIM activities.

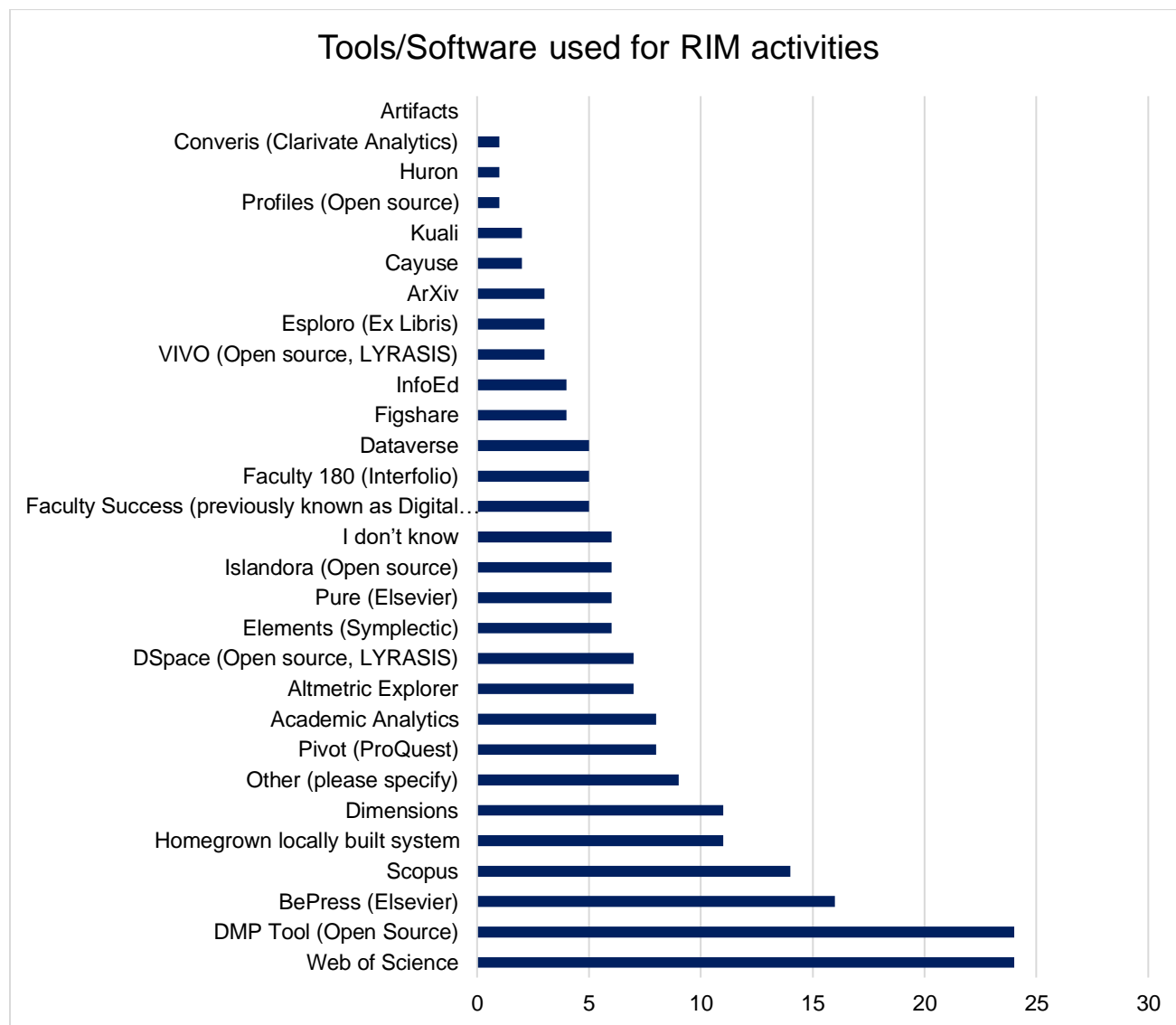
Again, the survey used the following definitions: "Institution" refers to your individual library, archive, museum, or other entity.

"Parent organization" refers to the larger organization under which your institution may fall (example: a university, university system, local or state government, public library system).

The first question asked respondents, "which tools/software are you using to help with RIM at your institution? Please select all that apply." The tools listed in the question represent a range of functions these tools were referenced earlier in the survey and may be broadly categorized as tools that:

- Host published research and/or preprints via an institutional repository
- Host research datasets via an institutional data repository
- Manage data compliance for grant projects
- Track grant awards within an organization
- Track research activity of affiliated researchers

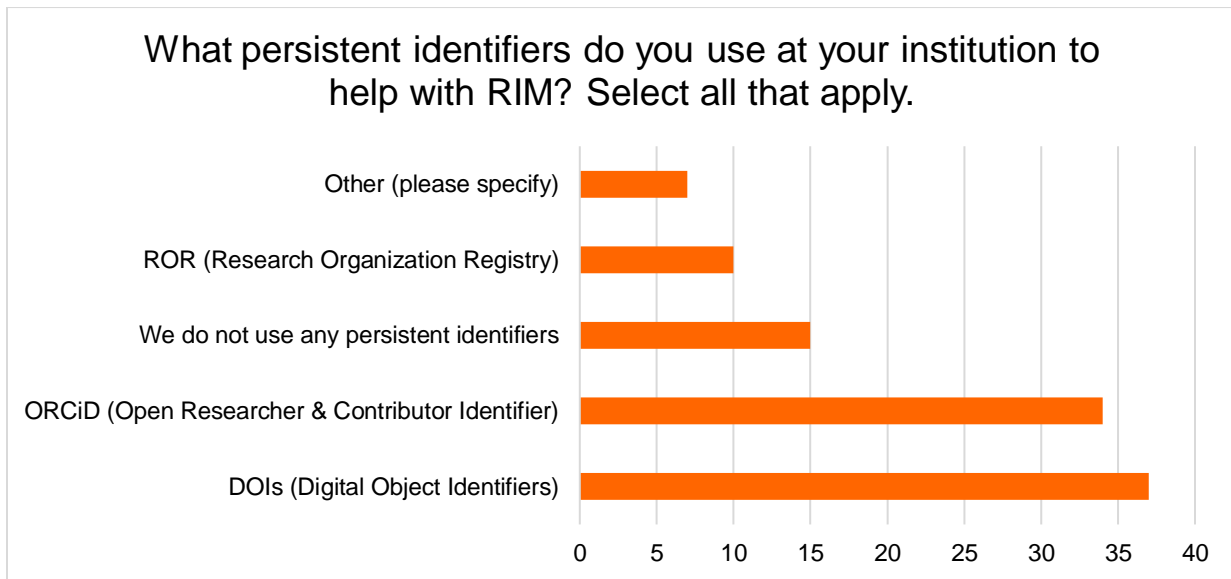
Chart 19.



The top four tools/software used by respondents were Web of Science, DMP Tool, BePress and Scopus, followed by homegrown or locally built systems. Two of the top tools were citation databases, while the others are a data management tool and an institutional repository. Under 'Other,' respondents mentioned PubMed and PubMed Central, Open Science Framework and Fedora/Samvera.

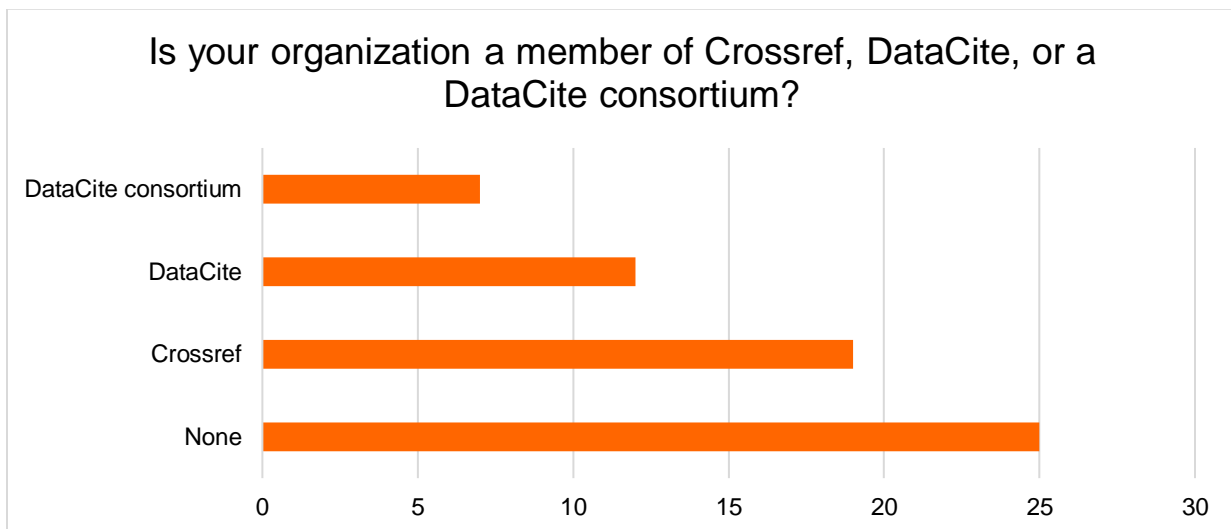
It should be noted that this question represents answers from predominantly library professionals – many of these platforms may be in use, but in other areas of the campus, and with no knowledge from the respondents in this survey. Therefore, these answers represent the tools that the library community is predominantly aware of using.

Chart 20.



Under 'Other,' two respondents mentioned Scopus IDs, along with a mention of the Web of Science ID, PubMed IDs, and "handles." One respondent mentioned GRID, an organization ID that was recently absorbed into ROR.

Chart 21.



Interestingly, most respondents said they are using DOIs in Chart 20, but in Chart 21, most respondents said they are not a member of a DOI registration agency. There may be differing interpretations about the definition of DOI, or perhaps where the DOIs are created: respondents may be tracking research outputs using DOIs, but not necessarily creating the DOIs themselves for local materials.

In the last part of the survey, respondents were asked if they could share what they consider their future directions and/or plans for RIM work. The purpose of this question was to provide

readers with an opportunity to compare their own plans with their contemporaries. The plans listed below indicate varying levels of engagement, but many appear to be reassessing their tools and skillsets to more effectively monitor and report on researcher activity, with repeated emphasis on ORCID integration across the campus environment, as well as an emphasis on data management. The answers are included below, unedited.

- *We have just begun requiring ORCID IDs for applicants. We are looking at assigning DOIs to grants via CrossRef (our grants management tool, Proposal Central, offers this functionality). Our main goal is to have a more robust method of checking compliance with our Open Science policies and tracking career progression for funded researchers once they have completed their AHA grant.*
- *Continued support and development of services to support RIM work, networked research outputs, data publishing, and persistent identifiers. The continued advocacy of data management best practices.*
- *We are in the process of implementing ORCIDs. I am hopeful that once we have that up and running, we can create some centralized analytics services for folks.*
- *The Dean of the Library is interested in having the library track/collect faculty scholarship, but we are in the very early stages of information-gathering about RIM practices at other schools and potential platforms/tools that we could use. This summer I am taking the Force11 Scholarly Communications Institute course "Analyzing Your Institution's Publishing Output" and I think this will provide a valuable foundation. Our library's Scholarly Communications Committee is also discussing our parent organization's specific institutional context and how that will influence the development and potential success (and challenges) of RIM work here on our campus. Personally, I see RIM work as necessarily collaborative across campus entities rather than the domain of one single unit.*
- *Expand VIVO and ReCiter work; build out our data retention tool currently in beta*
- *Hoping to have a data repository*
- *Proposal for data management [including RIM] was developed in 2014 with roadmap of steps to implement a new direction for records management of recognized research output as an institutional asset. Changes in administration at various levels resulted in no executive sponsorship. Distributed solutions are emerging by individual colleges [academic units] while attention is raised again for central administrative responsibility for assuring that through RIM, the U's output is FAIR. Pitch that library org is best positioned and professionally equipped to provide infrastructure for RIM as part of a holistic design for integrated curation, preservation, access, and guidance for use of data and other information resources critical for academic enterprise.*
- *Creating an educational series related to RIM, working with the Compliance Committee to improve data management and sharing in NIH grants, finding ways to track the datasets we have, and improving uptake of DMPTool*

- *developing artificial intelli metadata schematic guide; minting DOIs for both historic and current datasets, investigating DataOne*

- *We continue to expand our institutional repository.*

- *Updating job description to keep the next position current in the skills required and requested.*

- *I hope, at the completion of my degree, I can take on a new role within the university archive, and work towards a more holistic data management plan with regard to university data and faculty & student research.*

- *Our goal is to continue to implement the policies, tools, infrastructure and human resources necessary to assist our researchers in their work. We do not believe this will ever be self-supporting through grant funding. Therefore, we expect it to run as a subsidized service. BTW, I found this survey to be very library centric in the way the questions were written. It was difficult for me to complete it accurately because of that. Libraries are not, and should not, be the only place where RIM takes place. At my institution we have a very strong partnership with our library, but much of the support and strategic direction comes from our Office for Research.*

- *It is unclear at this time. Support of RIM is more of a desire than a reality given our current resources.*

- *We see RIM continuing to grow as a part of Library activities. As researchers and departments become of what we are doing for other departments or projects, there is increasing interest. Also, funder requirements seem to be expecting more detailed reporting which the library is able to provide. We have always handled some data, but that is an area that continues to expand and change. As administrative departments become more comfortable with data, bibliometrics has become a more important part of the library services. Not for evaluation of researchers, but to show collaborations and areas of strength of the parent institutions.*

- *In two years, we would like to be up and running to utilize this system to market our uploads to the parent systems that we have been hired to complete our contract.*

- *Establishing a repository for publications.*

- *Subscribing to/using an electronic grant management system*

- *We are actively studying RIM adoption, with a newly convened initiative to look at updating not just systems, but broader processes around scholarly outputs and impacts.*

- *We are currently building expertise and investigating possibilities around building out RDM support and data repository services, as well as investigating how best to leverage institutional ORCID membership for the benefit of our researchers and parent organization.*

- *Campus workshops/training. More open datasets in repository. More information-gathering about data management needs on campus.*
- *Link more ORCID iDs within the RIM. Created dynamic resumes using RIM data. Link projects with research output (pubs, datasets, etc.).*
- *Expansion or extension of RIM services at [REDACTED] will depend almost entirely on funding and whether the Program is specified in institutional and parent organization strategic plans. Currently we offer a certain level of service that is enhanced only incrementally due to staff and other resource restrictions.*
- *At our university we hope that our RIM system will become fully representative of the research, creative, and scholarly activities happening across all colleges and departments at the University, especially activities happening in the arts, humanities, and social sciences, which are often more difficult to capture and track. If this could be accomplished, our research tracking and reporting capabilities, our ability to understand research trends at the university and beyond, and the overall visibility of campus research, which is especially important for attracting new students, faculty, collaborators, and funding, would greatly improve. In order for our RIM system to fully represent the scholarship happening at our university, we have identified several actions that we hope can be taken, including:*
 - *Securing increased buy-in from university administrators to help with outreach and adoption of RIM profiles across schools and colleges, ensuring that all full-time faculty have profiles in the system*
 - *Investment in resources, especially technical expertise and dedicated staffing, in order to further develop connections between university reporting systems such as our RIM (Pure), FAR (Faculty Success), IR (Digital Commons), grant management systems (InfoReady & Cayuse), PeopleSoft, along with 3rd party profile and identity management systems like ORCID and CrossRef. System interconnectedness is a key component to being able to capture all relevant scholarly outputs, grants, and faculty affiliations, to reduce duplication of data entry across systems, and to reduce time spent on reporting.*
 - *Support from university administration to provide funding for dedicated staff to work with systems like ORCID to improve campus adoption of PID's, ROR's, and DOI's, which would enable improved tracking of scholarly outputs, and help ensure that researchers and their outputs are properly affiliated with the university.*
 - *Investment in dedicated staff to run our RIM system, especially staff who have technical and web expertise to develop API's. There have been several requests to begin pulling data such as faculty publications and research equipment, from our RIM system onto university webpages. At this time, we do not have the staffing or expertise to fulfill these requests.*
 - *Our current plans include working towards achieving full representation of faculty profiles and their scholarship within our RIM system, and better developing infrastructure and connectivity between our research and reporting systems to improve the availability and flow of data. We will then be better positioned in the future to focus on activities like benchmarking, SDG's, understanding open access trends, reporting on funder mandates, and leveraging RIM system data to showcase university scholarship for improved reach and visibility.*

- *A lot of work is planned in this area. The university will be selecting a new faculty annual reporting system in 2022-2033. ORCID will be rolled out more widely on campus (with institutional affiliation assertion also happening) and the libraries will be involved in promotional efforts for adoption for new research faculty. The University is also thinking of adopting a new RIM system for research reporting as well which will be supported centrally through the Office of Research and the libraries will be a part of the committee selecting the new tool.*
- *We are evaluating a more robust system like Esploro, Elements, or something similar.*
- *RIM is a new undertaking for our institution. We plan to offer services and instruction on topics spanning the data life cycle.*
- *After a few years of trying to lead a broad effort across campus, we are focusing on what has worked well thus far: focus on the metadata in Activity Insight. Problems with data regarding faculty plagued our work and there are efforts now to clean it up. Our project has led to a strong relationship with Institutional Research, so future directions will likely include more training for faculty on using data-feeds, ORCID, etc.*
- *We are implementing Academic Analytics and plan to integrate ORCID further on campus. No other concrete plans at this time.*
- *I expect this will be more explicitly built into our Strategic Planning, and we are hiring an OERs Librarian who will also work on Open Data. I've been advocating for increased F&A funding - we currently report on costs but do not get a share - it's always allocated elsewhere. However, I am leaving for a new job in August...*
- *Cautious to commit beyond repository and data management support without new funding.*

Conclusion

Given the results of this survey, which sought to build upon OCLC's previously released reports, it is clear that academic libraries are engaged with RIM, but they are by no means single actors in any campus- or organization-wide RIM efforts. RIM activities are generally concentrated in three areas across campus: the provost/chancellor's office, the office of research, and the library. The degree to which these three units interact varies considerably from campus to campus.

The roles libraries currently play in RIM are generally concentrated in the unique identifier and institutional repository arenas. For example, libraries have become engaged in digital object identifier (DOI) purchasing, assignment, and integration with campus systems to provide better tracking of research outputs. Likewise, libraries are increasingly involved in national researcher identifier communities such as ORCID. LYRASIS, has seen this trend grow, and has entered into partnership with the Big Ten Academic Alliance, the Greater Western Library Alliance, the NorthEast Research Libraries, and the Health Research Alliance. LYRASIS is also the organizational home for the ORCID US Community, and as of August 31, 2022, this community has 178 institutional members (<https://orcidus.lyrasis.org/>). The LYRASIS DataCite consortium has also seen increased participation, which is reflected in the high adoption of DOIs reported in the survey results.

Other key areas of RIM work, particularly grant tracking and compliance, remain firmly housed outside the library environment of the university. It may be up to librarians to take a leadership role and provide a bridge to these other areas of campus through training and through their involvement in overall RIM conversations.

It remains to be seen whether the White House Office of Science and Technology Policy announcement of August 25, 2022 (<https://www.whitehouse.gov/ostp/news-updates/2022/08/25/ostp-issues-guidance-to-make-federally-funded-research-freely-available-without-delay/>) will dramatically affect institutions of all sizes and their RIM activities. Support at the national level regarding non-embargoed open access for federally funded research will necessarily force institutions who receive any federal funds to examine how they purchase, track, and make available published materials. Moreover, if such support transitions from "guidance" as it is now, to more formal policies across government funding agencies, such as the National Institutes' of Health Public Access Policy (<https://www.whitehouse.gov/ostp/news-updates/2022/08/25/ostp-issues-guidance-to-make-federally-funded-research-freely-available-without-delay/>), then libraries, other campus units, and independent research institutions will need to examine their own policies, especially their internal data curation policies, accordingly.

It is critical that librarians and information professionals are vigilant about being involved in RIM activities so libraries can continue to remain both relevant and central to the research life cycle. Just as libraries experienced a fundamental paradigm shift from print to electronic in the last decade of the 20th century and the first decade of the 21st, institutions, particularly those involved in higher education are now entering a significant shift in funding models and tracking capabilities for research, and librarians can bring to bear their skills and expertise to help guide their organizations through murky RIM waters.

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