RSpace Support Group Pilot Summary Report

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Executive Summary

The RSpace Support Group pilot project was launched in July 2025 to assess awareness, use, and support of RSpace, an FAS-supported electronic lab notebook (ELN) available to Harvard researchers. Representatives from Harvard Library, University Research Computing (URC), the Office of the Vice Provost for Research (OVPR), and FAS Research Computing (FAS RC) were involved in the pilot, aimed at improving outreach, onboarding, documentation, and user support for the tool.

The pilot found RSpace to be a viable ELN option for Harvard's research community. To achieve broader adoption, however, the tool requires clearer support structures. Limited community awareness, inconsistent documentation, unclear service ownership, and constrained onboarding capacity make it difficult for researchers to evaluate and adopt RSpace. Pilot successes include improved documentation, streamlined onboarding workflows, new training and outreach materials, engagement with researchers through surveys and listening sessions, and resolved technical integration issues, creating a stronger foundation for future ELN adoption.

RSpace is currently supported through FAS-related service structures, but research needs around documentation, compliance, retention, collaboration, and research data management extend across many Schools and units. The primary recommendation from the group is to expand the existing National Institutes of Health (NIH) Data Management and Sharing Policy Response Group into a broader Research Data Management committee who will steward a new ELN/RSpace working group that can manage ongoing support needs for RSpace.

Introduction

The RSpace Support Group pilot project was launched in July 2025 to evaluate the existing utilization and outreach efforts of RSpace, the Harvard-supported enterprise ELN, and to develop a collaborative and sustainable model for ongoing support. The RSpace license was purchased in 2020 by Harvard IT, which has since maintained foundational support and core documentation.

Growing demand for ELNs, combined with external financial pressures, created a clear institutional need to reduce redundancies and maximize the value of existing tools. Supported by an IT Capital Review Board (ITCRB) grant, Harvard Library, University Research Computing (URC), and the Office of the Vice Provost for Research (OVPR), with assistance from FAS Research Computing, established this collaborative pilot project to broaden RSpace adoption and strengthen research data management (RDM) across Harvard.

Context and Goals

ELNs and RSpace

An electronic lab notebook (ELN) is a software tool designed to replicate and improve the functions of a traditional paper lab notebook. Researchers can enter protocols, observations, notes, and other data using a computer, mobile device, or other scientific instrument. ELNs offer several advantages over paper notebooks, including:

- Searchability and improved organization
- Support for good data management practices

- Configurable access controls and data security
- Easier collaboration within and across research groups

RSpace is a web-based ELN that helps researchers create, organize, and manage research documentation and data in a secure, centralized digital environment. Unlike ELNs built for specific scientific disciplines or commercial laboratory settings, RSpace is discipline-agnostic and designed with academic research environments in mind. It offers integrations with repositories, data management platforms, and computing infrastructure that are central to university research workflows.

Its flexible interface supports documentation across a wide range of methodologies and fields, from wet lab science to computational and qualitative research. These qualities make RSpace well-suited to Harvard's diverse and distributed research environment, serving communities across many Schools and departments while enabling collaboration across labs, campuses, and institutions without disrupting established workflows.

Goals, Initial Impressions, and User Survey

The pilot set out to:

- Understand the current awareness and use of RSpace.
- Identify barriers to adoption and effective use.
- Build a more coordinated support and governance model that could be sustained beyond the project period.

At the outset, the support group observed that RSpace-related documentation was limited, out of date, or inconsistent. Outreach was minimal, and onboarding new users was a tertiary responsibility for a single staff member. The University's relationship with the vendor was cordial but informal, and did not translate into structured, proactive support for researchers.

User Survey

To better understand awareness and needs, the group conducted an online survey of FAS Research Computing PIs (Appendix A). While the response rate was relatively low, the results aligned with our initial hypotheses and the rationale for creating the support group:

- The majority of respondents were unfamiliar with RSpace.
- Most faculty were not using any ELN.
- The lack of clear documentation and training, along with the time and effort required for onboarding, were major barriers to adoption.
- Desired ELN features included simplicity of use, workflow management, easy collaboration with other groups, compatibility with existing tools, and reliable technical support.

- Faculty indicated they would be more interested in an ELN if these barriers were addressed.

Based on this feedback, the group drafted pilot goals to:

- Improve public documentation and outreach around RSpace.
- Streamline onboarding processes and administrative workflows.
- Identify a small number of labs for deeper engagement to understand real-world use cases and needs.

Listening Sessions

Following the survey, the support group conducted a series of listening sessions with existing RSpace users and FAS PIs interested in ELNs more broadly. The purpose of listening sessions were to learn about both concrete experiences and aspirational use cases for RSpace.

Key themes from these conversations included:

- **Value with limitations:** RSpace was seen as a flexible, institutionally supported, and relatively low-cost ELN option. However, gaps in local support, training, and documentation limited satisfaction and uptake.
- **Integration and interoperability:** Interoperability with other tools, such as data repositories, storage systems, and computational environments was critical but underdeveloped from the perspective of many users.
- **Search and structure challenges:** Users struggled with search, structure, and findability in ELNs generally, including RSpace. Many expressed uncertainty about “good” organizational patterns and desired more examples and templates.
- **Growing compliance and collaboration needs:** Regulatory and compliance expectations, as well as cross-institutional collaboration requirements, are outgrowing paper-centric workflows. Labs see ELNs as a potential solution but need clearer guidance on how to use them effectively and compliantly.

Taken together, these conversations reinforced the hypothesis that the primary barrier to RSpace adoption is not the tool itself, but the lack of coordinated, university-level support, documentation, and outreach for ELNs and research record-keeping more broadly.

Successes

The support group synthesized findings from the survey and listening sessions and focused on building support mechanisms to directly address the immediate challenges researchers were experiencing.

Notable successes

- **Reorganized support structure**
  - Reassigned primary RSpace support from HUIT Academic Technology to a collaborative model across URC, OVPR, and Harvard Library.
  - URC assumed responsibility for intake and onboarding of new users.
  - Harvard Library and FAS RC led development and dissemination of documentation and marketing materials for RSpace.
- **Direct access and tool familiarity**
  - Secured full access to RSpace for support group members, enabling them to develop hands-on understanding of features, limitations, and common user pain points.
- **Improved documentation and outreach**
  - Drafted and published updated documentation and guidance on Harvard Library tools pages, including:
    - RSpace Tool Overview Page
    - RSpace @ Harvard LibGuide
    - ELN Onboarding Request Form
    - RSpace promotional flyer and related outreach materials (e.g., Top Reasons to Use RSpace)
  - Created a dedicated response group for onboarding and support inquiries in ServiceNow at: huit_eln_support@harvard.edu.
  - Modified the onboarding process to reduce friction for labs and individual users.
- **Training**
  - Developed a reusable RSpace training slide deck and demo materials that can be adapted for School- or department-specific sessions.
  - Developed and delivered a training session for researchers and staff at the Wyss Institute.
  - Drafted and planned general RSpace introduction trainings (July & August 2026).
- **User feedback and engagement**
  - Distributed a targeted user survey to:
    - Better understand the current RSpace user base.
    - Identify features and support that would entice future users.
  - Conducted outreach sessions with specific groups (e.g., research centers, departments) to gather additional feedback and refine guidance.
  - Participated in the Harvard Library Love Data Week “Tool Rodeo” to raise visibility and provide live demonstrations.
- **Technical integrations**
  - Resolved bugs across key software integrations with RSpace, including Harvard Dataverse, OneDrive, and DMP Tool.

To better align guidance and tool support across disciplines and Schools, the pilot group also identified strategic partners and stakeholders with whom to coordinate on RDM guidance and recommendations for ELNs, including the Longwood Medical Area Research Data Management

Working Group (LMA RDMWG) and the Harvard Medical School (HMS) ELN working group. Key takeaways from these discussions included:

- Platform choice is often driven as much by discipline and institutional backing as by features.
- The purpose and scope of ELNs must be clearly articulated and consistently messaged (e.g., documentation and compliance versus workflow and analysis integration).
- Support and onboarding are resource-intensive and not easily scalable without shared infrastructure and governance.
- External collaboration and sensitive data are often managed outside the ELN or within carefully defined boundaries.
- Cross-School coordination is necessary to align guidance, training, and expectations and to build communities of practice in a complex, evolving institutional environment.

Challenges

Despite the progress made during the pilot, several significant challenges remain in how RSpace is deployed and managed across the University. These challenges are structural and will require further, institution-level review and consideration:

Unclear long-term administrative home: While the pilot established a collaborative support structure across Harvard IT, URC, OVPR, and Harvard Library, long-term ownership of RSpace remains unresolved. Who is ultimately responsible for strategy, funding, and service continuity? Without clear accountability, there is a risk of gaps in support as demand grows or staff change.

Unsettled role of ELNs in Harvard's research ecosystem: Across the research community at Harvard, there is ongoing discussion about whether ELNs should primarily function as digital lab notebooks for documentation and compliance, or as integrated platforms embedded directly in research workflows (e.g., instrument integration, data pipelines, and analysis environments). Decisions about training, support, and future investment in RSpace depend on aligning stakeholders around a shared, realistic vision for its role.

Tension between compliance and collaboration: Data management mandates and institutional data security policies can conflict with the open, collaborative practices that many research groups rely on. Researchers need clearer, practical guidance on how to use RSpace to safeguard sensitive data and ensure research integrity while still collaborating within and across groups. Developing this guidance will require coordination among RDM, research integrity, and information security stakeholders.

Sustainable support with constrained resources: The units participating in this pilot are already operating under constrained capacity. Supporting RSpace at scale, through onboarding, training, consultation, and ongoing configuration requires thoughtful resource planning, clear delineation of responsibilities, and potentially new staffing or funding commitments from the University. Without this, support risks remaining ad hoc and person-dependent.

Key Findings

From the pilot's activities and stakeholder engagement, several key lessons emerged:

- **Institutional ELN support is required.**
    - Isolated or unit-specific support models cannot meet the demand for ELNs or provide consistent guidance across Schools and disciplines.
    - Like other research data management efforts, coordinated, institution-wide support, which includes a sustainable financial model that covers the cost for labs, clear guidance on how and why using RSpace is the preferred mechanism for research record keeping, and confirmation that RSpace aligns with relevant institutional and federal RDM policies, is essential for RSpace (or any other enterprise ELN) to succeed.
- **RSpace is a viable enterprise option.**
    - RSpace remains a strong option due to its flexibility, low per-user cost, and broad applicability across disciplines, data types, and research methods.
    - The open source and community driven attitude of RSpace encourages user buy-in, flexible use and development of new features, and maintains a strong connection to the goals of the research enterprise
    - RSpace are good partners and provide exceptionally high-quality support, training, and onboarding for new and existing users. The RSpace team is also highly motivated to meet Harvard's research needs.
- **Primary barriers to adoption are organizational.**
    - Barriers are related to support and governance, not technical issues.
- **Deep, distributed expertise is required.**
    - Individual staff cannot realistically develop and maintain the full breadth of expertise needed to provide high-touch, expert-level ELN support.
    - **Functional/tool expertise:**
        - Detailed expertise on RSpace features, configuration options, and best practices for structuring content
        - Understanding of baseline functionality as well as more nuanced knowledge of how to optimize the tool for different workflows.
    - **Disciplinary expertise:**
        - Familiarity with diverse research methods, documentation styles, and RDM practices across disciplines.
        - Understanding how specific research communities record and use information in order to recommend ELN practices that will be adopted and sustained.
    - **Institutional compliance expertise:**
        - Knowledge of institutional, funder, and government policies related to research practices (e.g., data retention, integrity, reproducibility, security).
        - ELN guidance must help labs meet day-to-day documentation needs as well as auditing and compliance requirements.
- **Onboarding must respect faculty and lab bandwidth.**

    - Faculty and lab staff do not have capacity for lengthy, high-touch onboarding programs.
    - Outreach, documentation, and training materials need to be sufficiently clear and complete for labs to adopt RSpace incrementally.
- **The University must provide starter workflows and ongoing engagement.**
    - Successful ELN adoption requires more than access to software.
    - Supply introductory workflows and templates tailored to common research scenarios.
    - Offer regular demos and training opportunities at School and department levels.
    - Continue to identify and document successful use cases and emerging applications.
    - Engage in an ongoing dialogue with users and the vendor to evolve the service over time.

These lessons are consistent with experiences at other institutions implementing ELNs, such as those documented in Foster, Whipple & Rios (2022), which highlight the importance of clear governance, robust training, and realistic expectations for ELN scope and integration.

Conclusions & Recommendations

Support for RSpace reflects a broader pattern in how RDM services and tools are managed at Harvard: support and governance are often piecemeal and ad hoc. The pilot addressed some immediate gaps, but the underlying structural issues require coordinated, institution-wide action.

Rather than building entirely new governance structures, Harvard is well-positioned to leverage and expand existing groups as a foundation for more coherent RDM coordination.

The following recommendations aim to build a sustainable, cross-organizational framework that responds directly to the challenges and lessons learned during the pilot.

Maintain Operational Support for RSpace

Harvard must stabilize and sustain RSpace as a reliable enterprise service. This requires predictable funding, clear operational ownership, and dedicated staff capacity so that PIs and research teams can confidently invest time and effort in adopting the tool.

- Ongoing, sustainable funding from the university is required to maintain and operate the tool, avoid service interruptions, and signal long-term institutional commitment.
- Continued administrative and operational support is necessary to serve existing and new users, manage accounts and configurations (especially with integrated tools), and maintain a good technical relationship with RSpace.
- University Research Computing (URC), in collaboration with university partners, should dedicate personnel to manage RSpace administrative requirements, onboard new users,

offboard existing users, contribute to university-wide training, and engage in marketing efforts to increase awareness and engagement.

Expand Existing NIH DMS Response Group into a Broader RDM Committee

Harvard has an existing cross-functional group, the Harvard University NIH Data Management and Sharing Policy Response Group, which convenes key stakeholders familiar with federal data management policies. Expanding this group's charge and membership will allow Harvard to move quickly without duplicating effort and builds on the productive relationship the pilot group developed with the HMS ELN support team.

A formal, university-wide community that can share and discuss RDM activities, resources, policies and guidance, and use cases across the institution is essential to integrating ELN support into a holistic, institution-wide approach to RDM.

An expanded RDM committee could be charged with:

- Ongoing dialogue and coordination on university-wide RDM issues.
- Providing guidance on policy interpretations and institutional responses to external policy developments.
- Aligning Research Data Management practices and guidance across Schools and disciplines in a way that is tool and platform agnostic.
- Establishing an ELN- or RSpace-focused working group to address the challenges identified in this report on an ongoing basis.
- Track ongoing resource needs across RDM service providers to identify opportunities for cost sharing, expanded support and collaboration, and broader user communities, and to surface emerging gaps that may require new investment.

Define the Role of ELN/RSpace Working Groups

Under the umbrella of the RDM committee, an ELN/RSpace working group would:

- Engage directly with PIs, users, and vendors to elevate lab-level issues and feature requests into broadly useful software improvements and integrations.
- Promote a unified approach to administering and managing ELNs.
- Support compliance with institutional and funder policies.
- Align RDM practices across common disciplines, methods, data types, and software ecosystems.
- Broaden stakeholder participation in ELN and RDM discussions to include:
    - Research integrity offices
    - Sponsored programs offices
    - Additional School-based research computing units
    - Core facilities
    - Academic representatives - ideally PIs and senior research staff with demonstrated commitment to strong RDM practices.

Cost of Inaction

If Harvard does not address the broader governance and support issues surfaced by this pilot, the University faces growing risks to researchers, support units, and the institution as a whole.

Continued inaction is likely to result in:

Security, retention, and user-experience risks

- Without coherent ELN governance, researchers will rely on non-enterprise tools or ad hoc solutions, increasing security, retention, and compliance risks.
- Researcher dissatisfaction with fragmented support and uneven user experience may erode confidence in institutional research support services.

Weakened data integrity and governance

- Documentation and training will become outdated and inconsistent, leading to variation in researcher experiences across Schools and units.
- Ad hoc tool selection will remain the default, complicating collaboration and interdisciplinary research.
- Institutional efforts to support good data practices, research integrity, and data governance will be less effective, and audits will be more challenging for research integrity and compliance staff.

Mismanagement and fragmentation of ELN services

- Offices supporting ELNs will provide inconsistent or duplicative support (e.g., overlapping training, unclear retention and offboarding practices), increasing administrative burden at a time of constrained resources.
- Integration with institutional systems (e.g., identity and access management, Harvard ORCID Connect) will be harder to scale and maintain, diminishing ELN utility and discouraging adoption.

Inefficient use of institutional funds

- The University will continue to fund an enterprise ELN that is not used to its full potential.
- Schools, departments, centers, and labs may continue to purchase alternative ELNs, increasing overall costs and dispersing institutional expertise.

Supporting Literature

The pilot's findings align with the broader literature on institutional ELN implementation and governance:

Grynoch, C. T., (2021) "Finding Connections in Policies Covering Electronic Laboratory Notebook Retention and Transferal", Journal of eScience Librarianship 10(1): 4. https://doi.org/10.7191/jeslib.2021.1190

> “Information Technology is working closely with the Library and University Administration to develop a digital notebook archiving process for electronic lab notebooks when a PI leaves the University”

Sayre, F., Bakker, C., Kelly, J., Kocher, M. & Lafferty, M., (2018) “Support for Electronic Lab Notebooks at Top American Research Universities”, Journal of eScience Librarianship 7(2): 8. https://doi.org/10.7191/jeslib.2018.1140

> “Of the 35 universities included in our scan, 8 (23%) had an enterprise-wide license for an ELN and 10 (28%) provided some kind of support for ELNs. Of the 10 institutions that offered support for ELNs, 9 involved the library.”

Foster, E. D., Whipple, E. C., & Rios, G. R. (2022). Implementing an institution-wide electronic lab notebook initiative. Journal of the Medical Library Association : JMLA, 110(2), 222–227. https://doi.org/10.5195/jmla.2022.1407

> "As the library assumed a leadership role for the ELN with support from IUSM Research Affairs, an Information Management Advisory Board (IMAB) was established with representatives from research affairs administration, marketing and communications, information technology, prominent PIs from the school, and the medical library. The IMAB was formed to guide the implementation and long-term support of the ELN, as well as other IUSM information and data management initiatives."

Peer Institutional Models

Several peer institutions provide useful reference models for how to structure ELN support and governance in ways that resemble Harvard’s decentralized environment:

- University of Virginia: “provided in partnership by the Office of the Vice President of Research, the University of Virginia Library, and the Claude Moore Health Sciences Library.”
- Northwestern University: “a partnership among Northwestern IT, IT units from some Northwestern Schools and Colleges, and LabArchives staff”
- Tufts: TTS (central IT) & RDMS (IT + Library)

Appendix A: User Survey

On September 19, 2025, the RSpace user survey was distributed to 754 recipients. Follow-up emails were sent on October 1 and 15, 2025, and the survey officially closed on October 20, 2025. Twenty surveys were recorded, with 15 completed for a 2% response rate (15/754). Key details follow.

Of the 15 survey respondents, one was a self-reported active RSpace user. Table 1 identifies respondent affiliation; Table 2, research environments; Table 3, current RDM tools used by respondents.

Table 1. Distribution of all Harvard school affiliations.

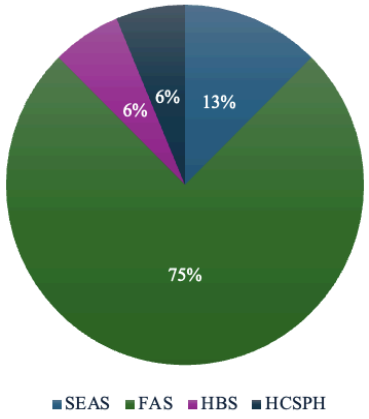


Table 2. Distribution of all research environments

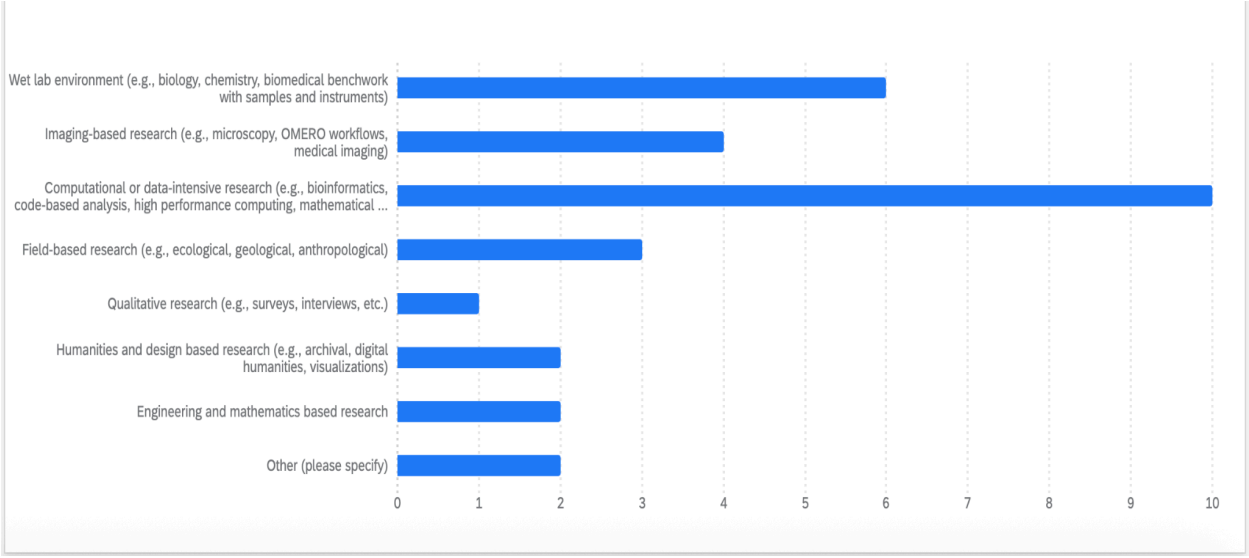
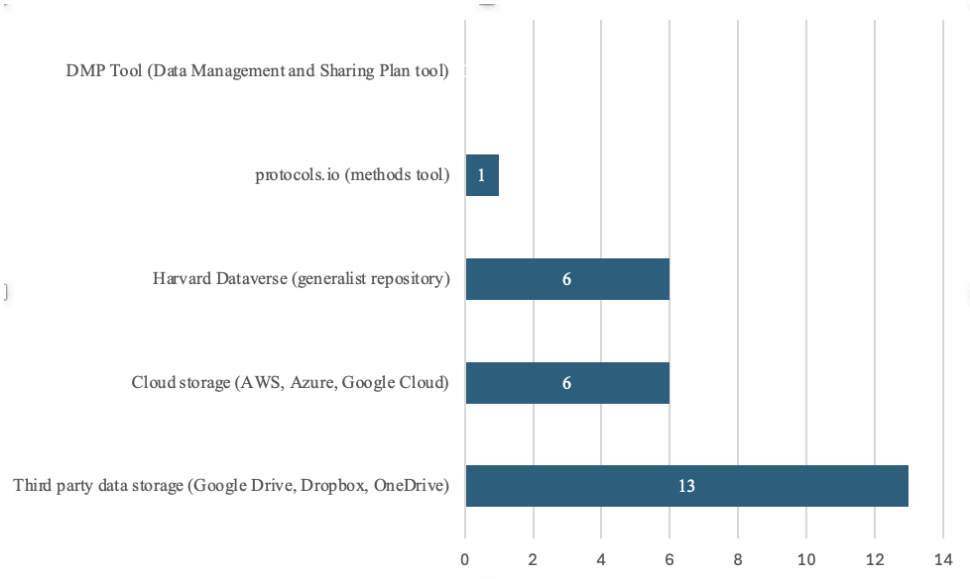


Table 3. RDM tools used by respondents.


DMP Tool (Data Management and Sharing Plan tool)
protocols.io (methods tool)
1
Harvard Dataverse (generalist repository)
6
Cloud storage (AWS, Azure, Google Cloud)
6
Third party data storage (Google Drive, Dropbox, OneDrive)
13
0
2
4
6
8
10
12
14