

The Research Software Alliance: Catalyzing community-led collaborations

Table of contents

Proposal Narrative	2
1. What is the main issue, problem, or subject and why is it important?.....	2
2. What is the major related work in this area?.....	4
3. What is the project? What are its goals and approach?.....	6
4. Who are the key members of the project team?.....	12
5. What is the work plan?.....	13
6. What will be the output from the project?.....	15
7. What is the summary justification for the requested funding?.....	16
8. What other sources of support has the proposer applied for or have in hand to support the project?.....	16
9. What is the status and output of current and/or previous Sloan grants?.....	16
Diversity, Equity & Inclusion Plan	20
Budget & Budget Justification	23
Required Appendices	27
List of Citations.....	27
Conflicts of Interest.....	30
Information Products.....	30

Proposal Narrative

1. What is the main issue, problem, or subject and why is it important?

The innovations of tomorrow rely on research software, which is now a ubiquitous tool for research in all fields. Software for research and innovation is critical infrastructure for research, industry, and civil society partners. Research software, and the people who develop and maintain it, operate with tremendously unstable resources and funding, due in part to insufficient understanding of research software characteristics and processes by key stakeholders. This instability negatively impacts innovation by slowing research, reducing reproducibility, and creating unstable career pathways (Anzt et al., 2020; Barker & Katz, 2022a; Carver et al., 2022; van Eeuwijk et al., 2021). There is an urgent need for international cooperation on policies, infrastructure, training, communities and incentives for research software to solidify next-generation research and innovation, and economic growth (Katz, 2022; Knowles et al., 2021).

International coordination to improve the research software ecosystem is needed to accelerate research outcomes, yet most funding is focused on national or disciplinary communities, and aimed at individual discoveries rather than developing and supporting software as enabling infrastructure (Barker & Katz, 2022b). Therefore, best practices remain siloed, and scarce funding is used for duplicative efforts. The Research Software Alliance (ReSA) is a global organization that unites decision-makers and influencers across the international research software community to share best practices and solve common challenges in a transparent and inclusive manner (Katz & Barker, 2023).

As the only international body facilitating organizational collaboration across the entire research software community (though there are others that focus on specific parts), ReSA has a critical role in creating and supporting the social infrastructure needed to enable the community to function globally in an open, accessible and inclusive manner. Social infrastructure is an asset that contributes to the creation and maintenance of the research ecosystem (Goble, 2022; The British Academy & Power to Change, 2023). ReSA has been effectively catalyzing collaboration across the community to build a bright future for the research software ecosystem around the world since its inception in 2019, but the pace of change is slow. ReSA is seeking a grant of US\$500,000 over two years (2024-26) to enable it to broaden its facilitation of community engagement, to increase the ability of the community to collaborate to solve common problems.

The activities that ReSA will undertake are based on ReSA's [Engagement Plan](#) (Hartley et al., 2023), particularly to improve community spaces (including in-person and online forums, conferences, and discussions) and communications to broaden community-led initiatives to solve common challenges. The following three activities aim to extend successful ReSA programs building towards the foundation of a stable research software ecosystem:

- Stakeholder forums: Initiate two new ongoing, regular forums for specific stakeholder groups, such as national research software engineering (RSE) associations, publishers, or infrastructure providers. This will aim to replicate, for a different sub-section of the research software community, the successes of ReSA's [Research Software Funders Forum](#), which is changing funders' understanding of this community and their investments in it.
- Conference groundwork: Identify and recommend community-supported routes for convening the first-ever international research software event, in 2025 or 2026. This will engage the community in exploring existing events and opportunities such as [RSECon](#), and utilize ReSA's experience of co-leading international events, including the [Future of](#)

[Research Software](#) and others, to make recommendations to key stakeholders on possible leadership, business models, focus, and DEI aspects.

- Task force pathways: Create a micro-grant program to incentivize the community to lead planning meetings on international issues that may lead to ReSA task forces (or working groups) that identify global solutions. This will build on ReSA's experience of developing ReSA [task forces](#), and in managing small-scale contracts.

2. What is the major related work in this area?

There are international organizations with a similar goal to that of ReSA, but in different subsets of the research ecosystem. These include the Research Data Alliance (RDA), the Future of Research Communications and e-Scholarship (FORCE11), Academic Data Science Alliance (ADSA), and Invest in Open Infrastructure (IOI). Each of these organizations undertake some activities similar to those of ReSA and its community (including stakeholder forums and an annual international conference), but for a different audience, and while these can slightly overlap, these organizations and ReSA also have significant differences. For this reason, ReSA periodically partners with RDA and FORCE11 on projects to leverage these overlaps to the benefit of both organizations, invites representatives of these organizations to participate in ReSA activities, and seeks to learn from their methods and experiences.

The major related work in this area is ReSA's own work, as ReSA is the only international organization engaging across the research software community. ReSA's community encompasses many relevant research software organizations, initiatives, and communities that have a national or regional focus, disciplinary focus, or thematic focus (such as software citation or representation of RSEs).

ReSA has built solid foundations since its inception in 2019, gaining international recognition as an important enabler of international collaborations to advance the research software ecosystem. ReSA has taken on the challenge of engaging multiple stakeholder groups across the international research software community to collaborate to achieve common goals (Hartley & Barker, 2023; Hartley & Barker, Michelle, 2024), with successes including:

- Funders: Leading development of a research software funders community that has engaged 60+ funding organizations in building towards better coordination of global investment. Key outcome: [Amsterdam Declaration on Funding Research Software Sustainability](#) (Research Software Alliance, 2023).
- Policy-makers: Engaging in drafting of the [OECD Recommendation on Access to Research Data from Public Funding](#) (OECD, 2021) and [UNESCO Recommendation on Open Science](#) (UNESCO, 2021). Key outcome: Inclusion of research software in key international policy and [toolkits](#) (UNESCO, 2022).
- Community leaders and influencers: Facilitation of [community leaders forums](#) and discussions, supported by [analysis](#) of relevant issues, to create task forces that enable community members with common challenges to jointly create solutions applicable at both local and global levels. Current task forces include [Policies in Research Organizations for Research Software](#) and [Research Software Authorship and Contribution](#), and successes include co-leading the development of the [FAIR for Research Software Principles](#). Key outcome: Bringing together the international community in a transparent, accessible and inclusive manner. For example, drafting the [FAIR for Research Software Principles](#) engaged 500+ community members, achieving [positive signals of adoption](#) that demonstrate high levels of community support (Barker, Chue Hong, et al., 2022) .
- Publishers: Supporting the ReSA task force on [code availability by publishers](#) to engage publishers in the coordination needed to gain wide-scale cultural change.

Outcome: Supporting the transition towards greater alignment on publisher policy and other related actions for code availability.

- International community: Co-leading initiatives in [Africa](#) (with [Research Software and Systems Engineers Africa](#)) and Asia (with [RSE Asia Association](#)) to identify research software community leaders and influencers to help shape international dialogues.

Outcomes: Engagement with key African stakeholders and development of awareness in the Asian region of the research software community (Bhogal, 2023; Van der Walt, 2023).

The community's valuing of ReSA's work can also be demonstrated through the depth of the support that the research software community contributes to ReSA. From 2019-23, resourcing of [\\$1,074,174](#) (\$730,174 cash and \$344,000 in-kind) has been provided by more than [20 organizations](#) (primarily philanthropies and national governments, and also including publishers and universities). Most of this has been in the form of project-specific grants. To establish a base level of organizational sustainability, ReSA now has in place [Organizational Members](#) and [Founding Members](#) programs that will provide support of at least \$100,000 per calendar year in 2024 and 2025. While this resourcing provides sustainability for basic operations such as communications and some engagement and collaboration opportunities, additional support is needed to initiate the activities of this grant proposal.

3. What is the project? What are its goals and approach?

The project aim will be achieved through the following three activities:

1. Stakeholder forums: Initiate two ongoing, regular forums for specific stakeholder groups.

This activity will use the model of the highly successful [Research Software Funders Forum](#) to

engage another stakeholder group. The activity will begin by engaging with different parts of the community to decide which stakeholders to focus on (3 months duration) for the first forum to be convened in this activity. Options include:

- National RSE Associations: A forum could further the nascent and currently mostly inactive efforts of the [International Council of RSE Associations](#), which has provided a formal open forum for established national and multinational RSE associations to coordinate to sustain international collaboration. The Council is not resourced and is challenged to achieve its goals; ReSA involvement could assist in providing secretariat support and increasing alignment with other international initiatives.
- Publishers: A forum could build on the work of the ReSA [Code Availability task force](#), and complementary work such as the [FORCE11 Software Citation Working Group](#), to bring together publishers to align their efforts to improve support for research software. A core group of publishers with this commitment already exists (including PLOS, F1000 and Hindawi); however, there is no formal, open and/or accessible mechanism for them to engage together to influence community practices.
- Infrastructure providers: A number of organizations provide critical research infrastructure to support research software, such as software registries and repositories (e.g., Zenodo, GitHub); journals (e.g., Journal of Open Source Software (JOSS), Journal of Research Software (JORS)); Software Sustainability Institute; and Software Heritage. Initiatives that create standards, such as the CITATION.cff project and software metadata schemas are also relevant (e.g., FAIR-Impact, CodeMeta). As for publishers, there is no formal, transparent and inclusive mechanism that enables these stakeholders to align their work to maximize impact.

The activity will then involve establishing a forum with the chosen stakeholder group (3 months duration to set up), which is likely to replicate the structure of the Research Software Funders

Forum in providing online meetings at six-weekly intervals, scheduled at alternating times to maximize attendance by participants in different time zones. Asynchronous communication mechanisms, such as a Slack channel, will also be established.

An evaluation of the forum will be undertaken after it has been running for 12 months, to identify ways to improve the forum as it continues for an additional 6 months. The forum will be considered a success if it:

- Attains a critical mass of 5-10+ members who attend regularly
- Attracts a wider group of 10-20+ additional members who attend less regularly
- Includes agenda items led by its members (not only the ReSA secretariat)
- Results in new initiatives led by forum members, such as forum working groups, hybrid workshops, and/or linkage with complementary initiatives.
- Engages a diverse membership and conducts meetings in an accessible and inclusive manner.

The benefits that this will provide include active coordination between disparate but aligned initiatives, reducing wasted and duplicated efforts.

This activity will be replicated in year 2, i.e., at the 12-month mark, ReSA will again engage with different parts of the community to decide which stakeholders to focus on (3 months duration), which will update the analysis already undertaken to decide the focus of the first forum in year 1.

The activity will then involve establishing the second forum with the chosen stakeholder group (3 months duration). This second forum will then convene for the remaining 6 months of the grant. Given this shorter time of establishment, the forum will be considered a success if it:

- Attains a critical mass of 5-10+ members who attend regularly
- Attracts a wider group of 10-15+ additional members who attend less regularly

Engages a diverse membership and conducts meetings in an accessible and inclusive manner.

2. Conference groundwork: Identify and recommend community-supported routes for convening the first-ever international research software event, in 2025 or 2026 (and bi-/annually thereafter). This activity will begin with analysis (6 months) of:

- Existing events (with a regional or thematic international focus) to understand if any of these could be expanded or leveraged, such as [RSECon](#), [Workshop on Sustainable Software Sustainability](#) (WoSSS), Software Sustainability Institute's [Collaborations Workshop](#), [US-RSE conference](#), [IEEE eScience](#), [RDA plenaries](#), and the [FORCE11 conference](#). This investigation will include consideration of leadership (can an existing event extend to this focus or does a new event need to be created, and which organization/s will be responsible for leading this), business models in use (e.g., will it be funded by industry sponsorship, participant registration costs, etc; how can the costs be underwritten), conference focus (e.g., stakeholder focus), and approaches to DEI (e.g., will the conference be hybrid and suit all time zones; how can in-person and/or online attendance be supported for participants from the Global South and/or disadvantaged groups; how will diversity of participants be achieved in the conference leadership and speakers; how will accessibility of all event materials be enabled; and how will an inclusive environment be achieved for the event).
- Lessons from ReSA's experience of co-leading international events including the [Future of Research Software](#), [International Research Software Funders](#) workshop, and [Vive la différence – research software engineers](#).

The activity will then create a written report summarizing these findings and recommending potential paths forward (3 months duration), and this will conclude the work on this activity under

this grant. It should be noted that the convening of an event will ultimately be dependent on securing funding (outside of the scope of this grant) for this event by the organizations who will lead this event. The timelines for an event would also be dependent on the organizers - the creation of a new conference would probably result in a 2026 conference date, but if instead an existing event will scale up then it is possible that movement in this direction could begin in 2025.

The activity will be considered a success if the report recommendations and implementation are supported by key stakeholders to the extent that conversations continue after the report's release to move towards convening a conference in 2025 or 2026. The benefits of this activity to the community are to systematically investigate this issue, as the potential benefits of a regular, international research software event are often identified by the community; however, the mandate (and business model) for doing so has been unclear. ReSA's role in collaborating across the community does provide the mandate needed to lead the community discussions needed to identify a solution that the community will support. It is anticipated that there will be benefits of the community engagement required to undertake the groundwork regardless of whether a conference occurs in 2025 or 2026, as these conversations will assist other events to more strongly consider their place within the ecosystem.

3. Task force pathways: Create a micro-grant program to incentivize the community to lead planning meetings on international issues that may lead to ReSA task forces. This activity will begin with consideration (3 months duration) of:

- Approaches by organizations that have provided micro-grant programs with some similarity, such as the Society of RSE's [Events and Initiatives Grant](#); or larger programs of relevance, such as Code for Science and Society's [Event Fund](#). This will focus on how

to maximize the benefits of small grant programs without requiring significant administration, particularly with regard to grant evaluation processes.

- Lessons from ReSA's experience of facilitating [task forces](#), and in managing [small-scale contracts](#) in 2022 to map the landscape of communities involved with research software in the Global South. The latter established a very simple application process.

An open call for this program with clear evaluation criteria will then be finalized (3 months duration). It is anticipated that this would support ten task force pathway planning meetings, each costing \$1,500. Eligible pathway planning meetings will require definition, such as requirements that activities address international issues, occur at international forums, are conducted for at least 1.5 hours, include a minimum amount of discussion time of one-third of the event, and address DEI requirements. The call is likely to be established as a rolling call, with applications accepted at any time during a 12-month period (for events within 15 months from the opening of the call). Grantees will be able to use the \$1,500 for items such as organizer time, speaker payments, event registration and/or travel, or event hosting costs (in-person and/or online). There may be some restrictions imposed by our fiscal sponsor due to contracting arrangements, such that applications cannot be accepted from Cuba, Iran, Syria, and North Korea.

There will be a requirement of a minimum output of a short written report from the event, to be publicly shared. ReSA will assist these pathway planning meetings by promoting the events and their outcomes, and also aiming to have a ReSA staff member present at each planning meeting. ReSA will also provide input to the planning meetings about other stakeholders who may be interested in the topic (and potentially provide resourcing for a task force), such as Research Software Funders Forum members and ReSA Organizational Members. The call will

include explanation of the benefits to applicants of their involvement in this program, including the option to progress the topic to becoming a ReSA task force with international recognition.

An evaluation of the activity will be undertaken on its completion, and this activity will be considered successful if ten task force pathway planning meetings result in written outputs, and ideally some of these will convert to become community-led ReSA task forces. The benefits of this program will be to incentivize the community to identify and share common issues in international forums, in a manner that encourages other community members with similar problems to self-identify and share challenges and solutions.

4. Who are the key members of the project team?

- Dr. Michelle Barker, ReSA Director: Michelle has enabled ReSA to achieve sector-wide impacts towards achievement of the ReSA mission, bringing extensive expertise and networks in open science, research software, skills and infrastructure. As a sociologist, Michelle is passionate about building collaborative partnerships to achieve system change. She serves on advisory boards for [FAIR Impact](#), [RSE Asia Association](#), and the [RDA Organizational Advisory Board](#); and is a past leader and funder of [Australian research software infrastructure](#). Her responsibilities will include leadership of strategy, operations, staff management, and stakeholder engagement.
- Dr. Daniel S. Katz, Chair of the ReSA Steering Committee: Dan is an international leader of the research software community who provides insights and connections into many different stakeholder groups. At the University of Illinois Urbana-Champaign, he is Chief Scientist at the National Center for Supercomputing Applications (NCSA) and Research Associate Professor in Computer Science, Electrical and Computer Engineering, and the School of Information Sciences (iSchool). He was a US funder during 4 years at the National Science Foundation (NSF), has co-led community around the people who

develop research software through [US-RSE](#), has engaged with the publishing community on [software citation](#) and [computational notebooks](#), and is a practicing researcher and open source software developer. Daniel will provide strategic inputs into the project and contribute to stakeholder engagement.

- Ms. Kim Hartley, ReSA Community Manager: As a ReSA community manager, Kim provides project management, communications, and secretariat support to a number of activities, including the Research Software Funders Forum. A social anthropologist by training, Kim brings a passion for understanding the ways in which people live in different social and cultural settings globally to her work managing communities. She has extensive experience in academic research administration, including facilitating a variety of research activities. Her responsibilities will include project management and stakeholder engagement.

ReSA's regional Community Managers in Africa, Asia, and Latin America will also be contracted for up to one month per year (over 12 months). Their contributions will be to engage stakeholders in their regions with these activities, through both communications and events; and to represent their regions in planning these activities for a global audience. One of the three regional Community Managers will also have an additional role to focus to directly support the goals of this grant by providing additional skills and effort to the team, particularly in communications (1 day/week for 2 years).

5. What is the work plan?

Activity	Person responsible	Duration (months)	Milestone
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Stakeholder forums: Identification of stakeholder group and set up of two forums	Michelle Barker, Kim Hartley (with input from Daniel S. Katz)	6 (year 1) 6 (year 2)	Forum established
Stakeholder forums: Forum is operational	Kim Hartley (with inputs from regional Community Managers)	18 (forum 1) 6 (forum 2)	Regular meetings occur
Conference groundwork: Engage with stakeholders to ascertain options	Michelle Barker (with input from Daniel S. Katz)	6	Engagement concludes
Conference groundwork: Draft report	Michelle Barker	3	Final report
Task force pathways: Create open call	Michelle Barker, Kim Hartley	6	Open call begins
Task force pathways: Call is operational	Kim Hartley (with inputs from regional Community Managers)	15	Planning meetings occur

The timelines for each activity are shown in the following GANTT chart:

Activity	April 2024 - Sept 24	Oct 24 - March 25	April 25 - Sept 25	Oct 25 - March 26
Stakeholder forums: Identification of stakeholder group and set up of first forum				
Stakeholder forums: First forum is operational				
Stakeholder forums: Identification of stakeholder group and set up of second forum				
Stakeholder forums: Second forum is operational				
Conference groundwork: Engage with stakeholders to ascertain options				

Conference groundwork: Draft report		Ends Dec			
Task force pathways: Create open call					
Task force pathways: Call is operational				Ends June	

The project also aims to achieve sustainability of activities going forward. For the stakeholder forum, it is anticipated that the forums could become self-supporting in the same way that the Research Software Funders Forum has, where participants become ReSA Organizational Members, enabling the forum to be supported in an ongoing manner as part of ReSA operations (not as a special activity). For the conference, it is anticipated that the report will include recommendations on how an event could be funded, and ideally will lay significant groundwork towards this during the community engagement leading to the recommendations. For the task force pathways, ReSA task forces emerging from the planning meetings will be supported through ReSA’s operational budget as existing task forces are. ReSA also offers stakeholders a mechanism to support task forces of interest to them through financial and/or in-kind support.

6. What will be the output from the project?

The tangible outputs for each of the three activities will be:

1. Stakeholder forums: Forum outputs such as reports, meeting notes, videos of presentations, etc.
2. Conference groundwork: A report identifying potential community-supported routes.
3. Task force pathways: Written report after each planning meeting, and ideally, the formation of task forces.

7. What is the summary justification for the requested funding?

The budget is \$500,000 over two years (2024-26), comprised of:

1. Part-time salaries for five ReSA staff to complete the activities. In addition, Daniel S. Katz will provide his time (as in-kind support for the project).
2. 15% of grant for finance and administration services provided by Code for Science & Society, ReSA's fiscal sponsor, who will receive and administer the grant.
3. Travel for ReSA staff and the Chair of ReSA's Steering Committee to support the goals of this grant.
4. Micro-grants for the task force pathways activity.

8. What other sources of support has the proposer applied for or have in hand to support the project?

ReSA will also be supported financially by its [Organizational Members](#) and [Founding Members](#) for the duration of this grant, for at least \$100,000 per calendar year in 2024 and 2025. This income provides ongoing sustainability for key ReSA operations. Consequently, this income will be used to undertake ReSA's essential, ongoing activities, including strategic planning, governance, stakeholder engagement, community forums (including the Research Software Funders Forum), and communications such as social media and the monthly newsletter.

9. What is the status and output of current and/or previous Sloan grants?

ReSA has completed the following four Sloan grants:

- (1) FAIR4RS (G-2021-14116). This grant enabled ReSA to provide project management in 2021 to the working group that developed community-endorsed [FAIR Principles for Research Software](#) (Barker, Chue Hong, et al., 2022). More than 500 community members were involved in the drafting of the [FAIR for Research Software Principles](#)

(FAIR4RS Principles). The FAIR4RS Principles were introduced in this *Scientific Data* [article](#) that has been accessed more than 18,000 times. This article also details the positive signals of adoption achieved, demonstrating the high levels of community support for implementation of the FAIR4RS Principles.

(2) Lorentz Centre workshop: Vive la différence – research software engineers

(G-2021-17158). This grant enabled ReSA to host [Vive la différence – research software engineers](#), a 2022 workshop that considered how RSE could be reframed to place DEI as a central organizing principle (Barker, Leung, et al., 2022). This hybrid workshop brought together 40 participants from across the globe, including representatives from international RSE communities and others interested in DEI. The workshop was successful in contributing to the creation of an informal network of champions of DEI in the research software community. Notably, national RSE associations have developed [DiveRSE](#) – a series of online discussions to provide a public forum to complement the Lorentz workshop, with an aim to broaden engagement in this discussion.

(3) Research Software Funders Forum (G-2021-17001). This project supported the development and initial operations of the [Research Software Funders Forum](#) in 2022. This grant enabled ReSA to convene the Funders Forum, which included chairing monthly meetings, supplying agenda materials, and sharing content of the resource materials through ReSA publications. In its first year, the Funders Forum successfully engaged a broad range of funders (government/government-funded, philanthropic, and industry) from across the globe. During 2022, more than 25 organizations engaged in the Funders Forum. Approximately 50 individual representatives from these organizations participated in Funders Forum meetings. Of the organizations engaged in the Funders Forum throughout 2022, 71% were government/government-funded; 21% were philanthropic; and 8% were from industry. Regions represented included Australasia (13%); Europe (50%); North America (33%); and South America (4%). The

inaugural [International Funders Workshop: The Future of Research Software](#) was hosted by ReSA and the Netherlands eScience Center in November 2022. Funding organizations joined forces to explore how to effectively contribute to making research software sustainable. This resulted in the first draft of the [Amsterdam Declaration on Funding Research Software Sustainability \(ADORE.software\)](#) for community consultation.

- (4) Research Software Funders Forum (G-2022-19564). This project supported the continuation of the [Research Software Funders Forum](#) throughout 2023, with an emphasis on growth and sustainability.

In terms of growth, continuation of the forum enabled ReSA to:

1. Double the number of funding organizations it had engaged with since the forum's inception (from 30 to 60).
2. Focus on serving newcomers (in addition to the experienced research software funders already present) to enlarge the global pool of funders.
3. Create linkages with other funder consortiums, with co-convening of meetings with the RDA Funders Forum, and participation of Open Research Funders Group (ORFG) representatives in 1-2 monthly calls.
4. Aim to increase funders from the Global South. Although this was challenging, members now represent Africa, Asia, Australasia, Europe, Latin America, North America, and South America.

Moreover, Funders Forum members have been actively involved in leading and participating in working groups that have resulted in outcomes such as a draft multilateral funding call and an accepted proposal for a research software side event at the upcoming Global Research Council annual meeting in 2024.

In terms of sustainability, this award enabled a transition to the forum becoming self-supporting. This award supported approximately half of the required funding for the forum to convene and grow in 2023, with the rest provided by Funders Forum members via ReSA's [Organizational Membership program](#). In 2024, the Organizational Membership and Founding Members income is providing ongoing sustainability for key ReSA operations, including the Funders Forum. The Funders Forum has successfully transitioned from an activity that needed support from a grant to one that is now supported by ReSA directly.

The release of [Version 1.0 of the Amsterdam Declaration on Funding Research Software Sustainability \(ADORE.software\)](#) and its complementary [toolkit](#) during the [second International Research Software Funders Workshop](#) is also a significant achievement that builds on actions undertaken by ReSA, the Funders Forum, research funding organizations, and the community to develop awareness about the role funders can play in sustaining software in the longer term.

Diversity, Equity & Inclusion Plan

The demographic makeup of the project team will include staff from five different areas of the globe (Oceania, North America, Africa, Asia, and Latin America), with this grant enabling diversification of this team through recruitment of a community manager from Latin America for the first time. Four staff identify as women, and one as a man, and one is still to be recruited.

ReSA's past record on issues of DEI include both activities where the content was specifically focused on DEI and incorporation of DEI principles into ReSA's broader work. Examples include:

- Leadership of [Vive la différence – research software engineers](#), a workshop that considered how RSE could be reframed to place DEI as a central organizing principle. DEI was also central to the workshop's design, with focus on participant demographics, accessibility of materials and live events. This workshop led to the development of [DiveRSE](#), which supports and raises awareness of DEI challenges and successes within the research software community. ReSA remains a member of the DiveRSE Organizing Committee.
- ReSA's [mapping](#) of research software communities and initiatives in the Global South utilized contractors from the Global South, and identified 126 organizations and communities and 62 funders, whose activities focus mainly on connecting people, training, and networking, and support through research grants.
- ReSA co-organized a [mini-symposium on DEI](#) at the [Platform for Advanced Scientific Computing \(PASC\) Conference](#) in 2022, and as an outcome is now jointly editing an invited special issue for [Computing in Science and Engineering](#) (CiSE) journal based on the mini-symposium, and entitled "Advancing Scientific Computing Across the Globe Through DEI: Successes and Challenges in Normalizing Inclusion".

- The Research Software Funders Forum includes a focus on increasing representation from funding organizations in the Global South. Whilst this has been challenging to achieve, this remains a priority going forward. ReSA's part-time community managers in Africa and Asia play a key role in facilitating connections in these regions.

Strategies to ensure an equitable and inclusive environment for both the project team, and the broader community that it will engage, include commitment to the ReSA [Code of Conduct](#) as a basis for all engagement. ReSA team meetings will continue to be cognizant of the breadth of time zones that ReSA staff are located in, and utilize alternate meeting times and asynchronous communications as needed. The ReSA Steering Committee provides an invaluable resource to support these strategies, bringing expertise from their own organizations' approaches to placing DEI at its core. Complementary projects or initiatives that the project will tap into include DEI initiatives of key stakeholders such as the [US-RSE DEI Working Group](#).

This project will ensure that outreach and dissemination activities are accessible and inclusive through a range of strategies:

- Stakeholder forums: As with the Research Software Funders Forum, it is anticipated that meetings will be scheduled at alternating times to maximize attendance by participants in different time zones, and that asynchronous discussions will also be enabled. Meeting goals will include engaging representatives from a range of organizations, including those in the Global South, and presenters will be encouraged to maximize the accessibility of meeting materials.
- Conference groundwork: DEI aspects will be part of the considerations for this activity, to maximize participation by all community members, based on best practices (Chautard & Hann, 2019; Joo et al., 2022; NumFOCUS, 2018; Ruhm, 2019). This will build on ReSA's experience in convening the Lorentz Centre workshop: [Vive la différence – research](#)

[software engineers](#) where DEI was central to both the workshop content and its design. DEI aspects to address include whether the workshop can be a hybrid event to ensure that anyone who wants to participate can, without having to be in a certain place and/or at certain times; provision of online sessions at alternating times to suit all time zones; provision of financial support for participants from the Global South and/or under-represented minorities to travel and/or access microgrants for online attendance; accessibility of event materials and in-person venues to suit all participants; diversity of the workshop leadership; design of the call for participation to maximize diversity; and design of the workshop agenda to ensure an inclusive and welcoming environment are achieved.

- Task force pathways: Planning for this activity will include ways to lower barriers to applying, and development of communications for the open plan that share the message to a wide range of geographic regions, including the Global South.

Recruitment of the Community Manager for Latin America will also incorporate DEI principles. For example, the position description specifically references ReSA's commitment to DEI, seeks to avoid implicitly biased language, and encourages application even if all criteria are not met. The role also enables flexibility in location and hours, shows the payment amount and closing deadline, and clarifies the interview process. In addition to ReSA's own advertising, ReSA will endeavor to reach other networks through a variety of channels, including both international organizations who actively engage with Latin American communities (e.g., The Carpentries, Open Life Science, rOpenSci, Society of RSE, Code for Science and Society), and communities that focus specifically on that region (e.g., SciPy Latam, MetaDocencia, and the [25 groups](#) previously identified in this region by ReSA (Martinez, 2022)).

Budget & Budget Justification

See attached tabular budget.

The budget is \$500,000 over two years (2024-26), composed of:

1. Part-time salaries for five ReSA staff to complete the three activities. Fringe rates are included in their monthly base costs, as these staff are contractors.
 - a. **The breakdown of staff effort overall on the 3 activities is approximately as follows:**
 - i. Year 1: Stakeholder forums 75%, conference groundwork 12.5%, and task force pathways 12.5%.
 - ii. Year 2: Stakeholder forums 87.5%, conference groundwork 0%, and task force pathways 12.5%. This reflects that two stakeholder forums will be supported in year 2, and that the conference groundwork activity will complete in year 1.
2. In addition, Daniel S. Katz will provide his time (as in-kind support for the project).
3. 15% of grant for finance and administration services provided by Code for Science & Society, ReSA's fiscal sponsor, who will receive and administer the grant. \$37,500 each year (\$75,000 over two years).
4. Travel for ReSA staff and the Chair of ReSA's Steering Committee to support the goals of this grant. Year 1: \$33,880, year 2: \$31,912. This would be distributed amongst staff each year as follows: Michelle Barker 60%, Daniel S. Katz 15%, Kim Hartley 15%, and Saranjeet Kaur 10%. This travel may include events such as:
 - a. [Global Research Council Annual Meeting](#), May 2024, Switzerland. ReSA is co-hosting a side event on research software. ReSA staff likely to attend using this funding: Michelle Barker, Daniel S. Katz

- b. [Third annual Funders Workshop](#), September 2024, Sweden. This event will be co-hosted by ReSA and SciLifeLab. Michelle Barker, Daniel S. Katz, Kim Harley.
- c. [NII Shonan Meeting](#), November 2024, Japan. ReSA has submitted a proposal to host a four-day workshop entitled Advancing Research Software Recognition and Collaboration/Support in Asia: Bridging Regional and International Perspectives. Michelle Barker, Saranjeet Kaur.
- d. [Global Research Council Annual Meeting](#), 2025 date and location TBC. ReSA is submitting a proposal that research software be one of the main topics. ReSA staff likely to attend using this funding: Michelle Barker, Daniel S. Katz.
- e. [RDA Plenary 24](#), October 2025, Australia. ReSA has previously co-hosted a funders forum at an RDA plenary, and also co-leads a ReSA task force with RDA. Michelle Barker, Kim Hartley

It is difficult to specify exactly which events will be attended, and the budgets for each, as this is dependent on what the stakeholder focus of the new forum will be, which organizations are likely to emerge as key stakeholders in the conference groundwork activity, and where/when task force pathways planning meetings happen. The meetings listed above are events that ReSA staff have identified as engaging a broad audience which are likely to be relevant to these activities.

- 5. Micro-grants for the task force pathways activity (listed under Consultants). \$7,500 each year (\$15,000 over two years). This budget item supports, over the two years of the project, the ten grants of \$1,500 that will be made available through the 12-month open call, which can be used for items such as organizer team, speaker payments, event registration and/or travel, or event hosting costs.

ReSA's other sources of funding

ReSA's existing work is supported financially by our [Organizational Members](#) and [Founding Members](#). ReSA will have other sources of funding totaling at least \$100,000 per calendar year in 2024 and 2025, and it is anticipated that this will rise by \$50,000 to reach \$150,000 in 2025. ReSA expects this income to rise as Organizational Membership will continue to grow each year. Moreover, in 2024, ReSA is initiating a program to enable sponsorship for ReSA task forces, which will provide resourcing for focus on community-identified priorities. The National Institutes for Health (NIH), for example, has expressed interest in supporting a ReSA task force. As mentioned above in section 3 with regard to the task force planning activity, ReSA will provide input to the planning meetings about other stakeholders who may be interested in the topic of the meetings, and who may potentially provide resourcing for a task force with this focus.

This other income will not support the grant, rather it will provide ongoing sustainability for key ReSA operations, such as:

- a) Communications activities including ReSA's Community Leaders Forum, webinars, website, newsletter, social media, and blogs.
- b) Community development through ReSA forums (including the Funders Forum) and existing task forces.
- c) Consulting activities such as funds for external advice; to offer payment to speakers for events such as ReSA Community Leadership Forums; and/or support for ReSA Steering Committee members through a small honorarium to recognize their effort.

Each year, approximately \$70,000 of other income will be used for part-time salaries for two ReSA staff to complete the activities described above.

Other expenses include the fiscal sponsorship fee (year 1: \$15,000, year 2: \$22,500); travel (year 1: \$5,000; year 2: \$10,000); and consultant fees (year 1: \$10,000; year 2: \$46,750) to support consulting activities listed in the previous paragraph.

Required Appendices

List of Citations

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Conflicts of Interest

The potential for conflict of interest lies in the fact that ReSA and some of the ReSA Steering Committee members' organizations receive funding from some of the organizations that this project is likely to engage. ReSA Steering Committee members are also involved in the governance of a number of projects, journals, and community initiatives that are also likely to be engaged. The ReSA Director also works part-time as a private consultant, and both past and potential clients include some of the key stakeholders for this project.

We do not see any current conflicts in performing this project's work, but as the project goes forward, we will ensure that potential conflicts of interest are identified and addressed in relation to each activity, discussing them with the sponsor of this project for suggested resolution, such as potentially restricting the involvement of those subject to the conflict.

Information Products

- Articles and working papers:

- This proposal will share the content of resource materials (unless they contain sensitive information) via blogs, white papers and/or articles. Blogs or white papers will be stored on Zenodo.
- Articles may be published in journals such as F1000Research, PLOS ONE, or Scientific Data, and preprints will be made available under a CC-BY license. It is highly likely that a copy of any articles will be archived in an institutional repository, and subject to an institutional mandate, but is dependent on the policies of individual authors' institutions.

- Websites & Web Content:

- Project-related websites will be hosted and maintained by ReSA (www.researchsoft.org).

- These websites will be maintained for at least 12 months after the completion of the project. Their relevance will then be reviewed, as the project publications and working papers will be publicly available elsewhere, as described above. If they are not going to be maintained then the websites could be archived with archive.org.
- ReSA will own the intellectual property of any web content on their websites, and it will be made available to others under a CC-BY license.

- Datasets:

- The creation of resources may involve the creation of datasets containing information about the research software community, which will be shared on Zenodo (unless they contain information that cannot be publicly shared). This data will be stored in CSV files and archived in zenodo.org with a CC-BY license.
- Metadata will be uploaded to explain and describe the archived data.
- It is not expected that there will be any legal issues that will complicate sharing and access.

- Video:

- Recordings of events will be made available whenever possible, and will be shared publicly on the ReSA Youtube channel.

- Other types of outputs: No software, study guides, artistic work, etc., will be produced.