



Research Software Alliance

**Engagement Plan**

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## 1. Introduction

The [Research Software Alliance](#) (ReSA) is an international non-profit organisation whose vision is that research software and those who develop and maintain it are recognised and valued as fundamental and vital to research worldwide. ReSA's mission is to bring research software communities together to collaborate on the advancement of research software. ReSA acts as a hub, working through and with other communities, to bring together a diverse range of stakeholders – including funding agencies, research organisations, and research communities – who advocate for the recognition of research software and its integral role within the research ecosystem.

ReSA engages with key decision-makers and influencers in research software across the globe. Stakeholders include more than 100 organisations that form the core of the research software community that ReSA seeks to serve. ReSA also engages with the broader research software community and those for whom software is just a small part of their interest. Some examples are stakeholders that focus on open science, reproducibility, roles and careers for people who are less visible in research, publishing and review, and other types of scholarly products and digital objects.

This engagement plan outlines ReSA's strategy for creating and sustaining an engaged international community of decision makers and key influencers who share ReSA's vision.

## 2. ReSA's community

ReSA serves a global community composed of key influencers and decision makers who share ReSA's vision and wish to collaborate to achieve it. Community members together identify challenges, and create and implement solutions across ReSA's three overlapping themes: people, policy and infrastructure.

Since 2019, ReSA has created a growing community of members from across the globe, and towards the end of 2022, launched its [Organisational Membership](#). ReSA's community members demonstrate their commitment to international collaboration and innovation for research by supporting ReSA's vision. The community includes national/regional organisations; funders; policy makers; infrastructures; thematic organisations; publishers; and a variety of individual members who have different professional roles (e.g., researchers, research software engineers, infrastructure support, librarians, technical leads, and project/program managers). These stakeholders collaborate to create outcomes that will achieve both their goals and those of the international community.

ReSA's community also includes the organisation's six Founding Members: Alfred P. Sloan Foundation; Australian Research Data Commons; Digital Research Alliance of Canada; National Center for Supercomputing Applications; Netherlands eScience Center; and Software Sustainability Institute. Founding members express their deep commitment to the ReSA vision

by providing resources needed to support ReSA in its aim to bring research software communities together to collaborate on the advancement of the research software ecosystem. These community members are considered champions, as they engage in activities and take on more responsibility for the success, sustainability, and/or running of the community.

Community members can be nominally classified into subgroups as described in Table 1, noting that many organisations have multiple foci.

Table 1: Organisational member types

Stakeholder type	Examples
<p><b>National/regional organisations</b> wishing to share best practices and identify opportunities for collaboration.</p>	<ul style="list-style-type: none"> <li>• <i>National:</i> Indonesian National Agency for Research and Innovation; Korea Institute of Science and Technology Information (KISTI); US National Institutes of Health (NIH).</li> <li>• <i>Regional:</i> African Open Science Platform (AOSP); European Commission (EC); South East Asian Network for Open Science (SEANOS).</li> </ul>
<p><b>Funders</b> who wish to collaboratively develop strategic ways to support open science and culture.</p>	<ul style="list-style-type: none"> <li>• <i>Government:</i> Executive Agency for Higher Education, Research, Development and Innovation Funding of Romania; São Paulo Research Foundation (FAPESP); UK Research and Innovation (UKRI).</li> <li>• <i>Philanthropy:</i> Chan Zuckerberg Initiative (CZI); Schmidt Futures; Volkswagen Foundation.</li> <li>• <i>Industry:</i> Oracle for Research; SAGE Publishing.</li> </ul>
<p><b>Policy makers</b> who are motivated to share and improve their software-related initiatives.</p>	<ul style="list-style-type: none"> <li>• <i>National:</i> Chinese Academy of Sciences; German Research Foundation (DFG); Japan Science and Technology Agency (JST); US Department of Energy (DoE).</li> <li>• <i>International:</i> Organisation for Economic Co-operation and Development (OECD); San Francisco Declaration on Research Assessment (DORA); United Nations Educational, Scientific and Cultural Organization (UNESCO).</li> </ul>
<p><b>Infrastructures</b> interested in advocating for reuse of their services and best practices and collaboration opportunities.</p>	<ul style="list-style-type: none"> <li>• <i>National / regional:</i> European Open Science Cloud (EOSC); New Zealand eScience Infrastructure (NeSI); South African National Integrated Cyberinfrastructure System.</li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Disciplinary</i>: Earth Science Information Partners (ESIP); ELIXIR; International Neuroinformatics Coordinating Facility (INCF); Molecular Sciences Software Institute (MOISSI); National Aeronautics and Space Administration (NASA).</li> <li>• <i>Thematic</i>: Mozilla Science Foundation; GitHub; Software Heritage.</li> </ul>
<p><b>Thematic organisations</b> seeking to engage with others to achieve joint goals. These may have a focus on a theme such as training, careers, preservation, sustainability, specific programming language communities, etc.</p>	<p>Research Data Alliance (RDA); rOpenSci; Software Source Code Interest Group (SSCIG); Society of RSE and other RSE associations, including RSE Asia Association and Research Software &amp; Systems Engineers Africa; Software Sustainability Institute (SSI), US Research Software Sustainability Institute (URSSI); The Carpentries; Better Scientific Software (BSSw).</p>
<p><b>Publishers</b> seeking to share and evolve their software-related initiatives in publishing.</p>	<p>American Geophysical Union (AGU); eLife; F1000; Journal of Open Source Software (JOSS); Journal of Research Software (JORS); PLOS.</p>

### 3. ReSA’s engagement activities

ReSA is engaged in a variety of activities that complement its strategic goals. In general, ReSA aims to undertake a broad range of activities to reflect its vision and mission. The core ways in which ReSA engages with its community include the following activities.

#### Task Forces

ReSA regularly convenes and facilitates task forces on specific issues impacting the global research software ecosystem. ReSA task forces enable the community to focus on and identify challenges and solutions for a particular area, at the international level. An [overview](#) of current and completed task forces is available. Participation in ReSA’s task forces offers stakeholders an opportunity to contribute, collaborate, and co-create with others in the global research software community. ReSA task forces have created a broad range of outputs – including guidelines, recommendations, reports, blogs, and principles adopted by a variety of organisations – for policy makers, funders, key influencers, and the research community.

#### Community Consultations

ReSA [community consultations](#) facilitate discussions to identify and prioritise challenges across ReSA’s three key themes: people, policy, and infrastructure. Community consultations are core ReSA activities, enabling the community to collaborate on elucidating how to advance visibility

of research software. For example, the [ReSA People Roadmap](#) community consultation facilitated identification and prioritisation of the major issues related to people (or personnel) challenges faced by the research software community, including research software engineers.

## Forums

ReSA facilitates forums with specific groups of stakeholders, as relevant. These forums offer these stakeholders an opportunity to come together to exchange information and collaborate on an international level.

For example, ReSA convenes the [Research Software Funders Forum](#) – a collaboration of funding organisations committed to supporting research software, and those who develop it, as fundamental and vital to research. The Funders Forum, which to date has engaged more than 30 funding organisations from across the globe, aims to provide a formal mechanism to share funder practices and consider how to address common funder challenges to achieve the significant cultural change needed across the research sector globally.

ReSA also hosts periodic [Research Software Community Forums](#) as a way to introduce and update stakeholders on ReSA, and provide information about how to engage with the ReSA community and the global research software community more broadly. Community forums are open to everyone. They offer an opportunity for participants to meet and share information, with the aim of facilitating community consideration about what is needed to address particular issues.

## Resources

ReSA creates a range of [outputs](#) that provide useful references to support recognition and valuing of research software as a key component of research. Examples of ReSA's output activities include [blog posts](#), [resources](#), [events](#), [videos](#), social media posts, and responses to requests for information. Further, ReSA aims to amplify the work of others in the research software ecosystem by establishing opportunities for co-creation and collaboration. Community members are also encouraged to share relevant resources and funding opportunities via ReSA's [public database of research software funding opportunities](#), ReSA's [Zotero group library](#) and ReSA's [Zenodo community](#). ReSA will continue to develop resources (e.g., reports, blog posts, guidelines) that highlight community members' expertise and provide evidence to support the recognition and value of research software.

## Communications

ReSA communicates with its community members via monthly [newsletters](#) and social media channels. The ReSA newsletter features community news, updates on ReSA, special projects/events, opportunities to get involved with community initiatives, and community events and resources.

ReSA creates and shares content on its [Twitter](#), [Mastodon](#), and [Slack](#) channels. ReSA also shares recorded talks from community forums and events via its [YouTube](#) channel.

## 4. Modes for engagement with ReSA

ReSA's engagement approach is based on the [Community Participation Model](#) from the Center for Scientific Collaboration and Community Engagement (CSCCE), which identifies four modes of stakeholder engagement that can occur within a community: (1) convey/consume; (2) contribute; (3) collaborate; and (4) co-create. The model enables the identification of the types of activities that may be relevant to each mode. This model is applied in Table 2 to the ReSA community activities to illustrate the opportunities that ReSA provides for community members to engage in any of the four modes:

Table 2: Modes for engagement with ReSA

Convey/consume	Contribute	Collaborate	Co-create
Information can be accessed via: <ul style="list-style-type: none"> <li>• Newsletter</li> <li>• Twitter</li> <li>• Slack</li> <li>• Mastodon</li> <li>• YouTube channel</li> <li>• Website</li> <li>• Blog</li> <li>• ReSA Zenodo community</li> <li>• Forums</li> <li>• Events</li> </ul>	Input can be provided through: <ul style="list-style-type: none"> <li>• Task force participation</li> <li>• Newsletter contributions</li> <li>• Forum participation</li> <li>• Sharing news via Slack</li> <li>• Commenting on ReSA reports, such as strategic plans, engagement plans, and annual reports</li> <li>• Providing information on funding opportunities</li> </ul>	Participation can be achieved through: <ul style="list-style-type: none"> <li>• Task force participation</li> <li>• Forum participation</li> <li>• Event participation</li> <li>• Slack discussions</li> <li>• Creating content</li> </ul>	Joint leadership is available via: <ul style="list-style-type: none"> <li>• Founding membership (champions)</li> <li>• Steering Committee membership</li> <li>• Task force leadership</li> <li>• Co-organising an event</li> <li>• Co-leading creation of content such as articles</li> </ul>

## 5. Matching programming to member goals

A key element of community engagement is facilitating activities that enable members to achieve their goals by working with others in the community. Table 3 outlines how ReSA's engagement activities address the different interests of stakeholders.

Table 3: Alignment of ReSA engagement activities with stakeholders' goals

Activity	Stakeholder goals					
	Access to best practice	Sector news	Networks	Collaboration opportunities	Share own initiatives	Influence ReSA's strategic direction
Task forces	✓		✓	✓	✓	
Community consultations	✓	✓	✓	✓	✓	✓
Forums	✓	✓	✓	✓	✓	
Resources	✓	✓			✓	
Communications	✓	✓			✓	

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