



NSTF Discussion Forum:

Research software as enabler and research output

in partnership with the NSTF Science Councils and Statutory Bodies Sector (SciCom) and University of Cape Town (UCT) eResearch Centre

7-8 October 2026

Special context: Day 2 coincides with [International Research Software Engineer \(RSE\) Day](#)



Background and context: Research software (RS), including source code, algorithms, scripts, computational workflows, simulation models and executable tools developed during or for research, underpins an increasing proportion of contemporary research across disciplines. It enables modelling, data analysis, artificial intelligence (AI), digital humanities scholarship, high-performance computing, health research, environmental monitoring and engineering design.

Despite its central role in knowledge production, RS is often not systematically recognised in research evaluation frameworks, funding mechanisms or institutional support models. Challenges include sustainability beyond project funding cycles, limited career pathways for RS professionals, inconsistent quality and reproducibility practices, fragmented infrastructure, and limited national policy alignment.

Internationally, RS has become a topic of focused policy attention. The Organisation for Economic Co-operation and Development (OECD) has initiated work on access to RS, examining governance, infrastructure, sustainability and policy frameworks. This builds on the [OECD Recommendation on Access to Research Data from Public Funding](#), which now explicitly includes software. The Research Data Alliance (RDA) and Research Software Alliance (ReSA) established the [Policies in Research Organisations for Research Software](#) (PRO4RS) working group in 2023. Their final report was recently published on Zenodo along with a [database of national and institutional policies](#) focusing on RS.

Within South Africa (SA), the inclusion of [Research Software Awards](#) within the [National Science and Technology Forum \(NSTF\) Awards](#) portfolio reflects growing recognition of software as a research output. The UCT eResearch Centre, working with NSTF and in partnership with the [South African Centre for Digital Language Resources \(SADiLaR\)](#), played a leading role in initiating and conceptualising this new award

category, building the case for its introduction and helping to identify sponsorship. This work forms part of UCT eResearch's broader leadership in RS capability development through advocacy, community building, training, institutional capability design, and national and international engagement to strengthen recognition and support for research software and the people who develop and sustain it.

The 2026 South African Open Science Policy provides an important further context for considering how research software is recognised and supported within the national research system. The programme also creates an opportunity to consider how journal requirements for sharing the code underlying academic publications can contribute to greater transparency, reproducibility and recognition.

Against this backdrop, NSTF and the UCT eResearch Centre, in collaboration with the [NSTF SciCom](#), propose a two-day online discussion forum to examine RS from complementary perspectives. Day 1 will map the current landscape through a keynote, institutional case studies from South African science councils, statutory bodies and national research infrastructure organisations, and an overview of the international RSE movement and survey. Day 2 will focus on national and international approaches to recognising RS and RS professionals, the place of software in open science policy and scholarly publishing, and cross-sector perspectives on future priorities.

Co-hosting partnership: The co-hosting partnership combines complementary strengths. NSTF brings a national, cross-sector convening platform, established relationships across the science system, and experience in facilitating public discussion on strategic science, engineering, technology (SET) and innovation issues. The UCT eResearch Centre contributes subject-matter leadership, programme conceptualisation and practical experience in developing RS capability at institutional, national and regional levels.

UCT eResearch's contribution includes its leading role in conceptualising the NSTF Research Software Awards and helping to establish the partnerships and sponsorship needed to launch the category. More broadly, it has contributed to RS capability development through community building, training, advocacy, institutional support and service-model development, and engagement with national and international RS initiatives. Co-hosting the forum therefore connects NSTF's national reach and convening role with UCT eResearch's sustained expertise and leadership in this field.

Purpose of the NSTF Discussion Forum: The purpose of this discussion forum is to provide a structured platform for dialogue among statutory bodies, science councils, universities, policymakers, infrastructure providers, RS practitioners, researchers, publishers and open science stakeholders. Through the partnership between NSTF and the UCT eResearch Centre, the forum will combine national convening reach with RS subject expertise and practical capability-development experience. It will:

- Build a shared picture of how RS is currently developed, used and supported across a range of South African public research organisations to complement similar presentations in the past
- Surface practical realities, opportunities and challenges experienced by organisations working with RS
- Connect South African experience to the international RSE movement and evidence from the international RS survey
- Examine RS as a first-class research output and RS professionals as a critical part of the research workforce
- Explore relevant national and international policy developments, including OECD work, ReSA initiatives and the South African Open Science Policy
- Consider expectations for sharing code that underlies academic publications
- Identify priority issues and possible next steps through audience discussion, a multi-stakeholder panel and final synthesis.

Themes: The discussion forum will address the following thematic areas:

RS in the South African research landscape

- The role of RS within the contemporary research ecosystem
- Institutional experiences from science councils, statutory bodies and national infrastructure organisations
- Common realities, opportunities, challenges and support needs across different research domains
- The relationship between RS, advanced computing, data-intensive research and domain research activity

RS communities, skills and evidence

- The development of the international RSE movement
- Findings and perspectives emerging from the international RS survey
- RS engineers and other software-producing research roles
- The visibility and recognition of people who develop and sustain RS

Recognition and policy

- National recognition of RS
- RS as a first-class research output
- RS professionals as critical skills within the research system
- International policy work led by organisations including ReSA and the OECD
- Implications of international developments for the South African context

Open science and scholarly publishing

- The place of RS within the South African Open Science Policy
- Requirements and expectations for sharing code underlying academic publications
- The relationship between code sharing, transparency and reproducibility
- The responsibilities of researchers, institutions, journals and other stakeholders

Cross-sector perspectives and future priorities

- Perspectives from NSTF RS award recipients and the award sponsor
- The role of the African Open Science Platform and other national or regional initiatives
- Opportunities to strengthen visibility, recognition and coordination
- Priority considerations for continued national dialogue and action

Objectives

1. Position RS as an essential component of SA's research and innovation ecosystem
2. Document and share examples of RS activity across the [South African Medical Research Council \(SAMRC\)](#), [Centre for High-Performance Computing \(CHPC\)](#); [Council for Scientific and Industrial Research \(CSIR\)](#), [South African Environmental Observation Network \(SAEON\)](#), [Human Sciences Research Council \(HSRC\)](#), [South African National Space Agency \(SANSA\)](#), [South African National Biodiversity Institute \(SANBI\)](#), [Council for Geoscience \(CGS\)](#), [Agricultural Research Council \(ARC\)](#) and [Water Research Commission \(WRC\)](#)
3. Increase understanding of the international RSE movement and RS workforce through evidence from the international RS survey
4. Examine how RS and RS professionals can be more effectively recognised within national research, policy and reward systems
5. Connect international policy developments led by ReSA and the OECD with current South African policy discussions

6. Explore how the South African Open Science Policy and journal code-sharing requirements can support greater visibility, transparency and reproducibility
7. Facilitate dialogue among researchers, practitioners, policymakers, infrastructure organisations, publishers, award recipients and other stakeholders on priorities for future action
8. Build on the complementary leadership of NSTF and the UCT eResearch Centre to strengthen coordination and future RS capability development in SA

Programme Structure: The programme is designed as two linked online days. Day 1 establishes an evidence-rich picture of RS in practice across South African organisations. Day 2 builds on this landscape by examining recognition, policy and publishing, before bringing together multiple perspectives in a concluding panel and synthesis.

Day 1 – RS in practice: Mapping the South African landscape

Date and time: 7 October 2026, 09:00-15:00

Opening and keynote

- Welcome by Ms Jansie Niehaus, NSTF Executive Director
- Keynote by Prof Mattia Vaccari, Director: UCT eResearch Centre – setting the scene, positioning the importance of RS within the current research ecosystem, and highlighting key realities, opportunities and challenges

Institutional perspectives on RS

The programme will feature short, applied talks on research software activity at a selection of the following science councils and statutory bodies:

- SAMRC; CHPC/CSIR; SAEON; HSRC; SANSA; SANBI; CGS; ARC and WRC

The talks will be grouped into thematic blocks with dedicated question-and-answer periods, enabling comparison across organisations and research domains.

International RSE movement and survey

- Presentation by Ms Anelda van der Walt, Senior eResearch Analyst: UCT eResearch Centre – providing background on the international RSE movement and the international RS survey
- Audience questions and discussion
- Summary of Day 1 and framing for Day 2 by Ms Jansie Niehaus

Day 2 – Recognition, policy and the future of RS

Date and time: 8 October 2026, 09:00–15:00

Special context: International RSE Day

National and international recognition and policy

- Welcome by Ms Jansie Niehaus
- Keynote by a representative of the Department of Science, Technology & Innovation (DST&I) on national recognition of RS
- Presentation by Dr Michelle Barker on ReSA's role in recognising RS as a first-class research output and RS engineers as critical skills through national and institutional policy work globally
- Presentation by Dr Alan Paic on OECD workshops and case studies concerning RS policy

- Question-and-answer session

Open science and scholarly publishing

- Presentation on how RS features in the South African Open Science Policy published in 2026
- Perspective from a South African journal editor on requirements for sharing code underlying academic publications
- Question-and-answer session

Multi-stakeholder panel and synthesis

- Panel including perspectives from NSTF RS award recipients, the award sponsor and the African Open Science Platform (AOSP)
- Closing synthesis and wrap-up by Ms Jansie Niehaus

Target audience: Participation will be open to the public, with a focus on:

- Representatives of statutory bodies and science councils
- Government departments responsible for research, science, technology and innovation
- Universities and research institutions
- RS engineers, computational researchers and other RS practitioners
- Infrastructure providers and digital research support units
- Research funders, award sponsors and innovation stakeholders
- Open science organisations and initiatives
- Journal editors, publishers and research integrity stakeholders
- Early-career and postgraduate researchers engaged in software development
- Researchers and research leaders seeking to strengthen the visibility, sustainability and impact of RS

Expected outputs: Consistent with [NSTF Discussion Forum](#) practice, outputs will include:

- A media release will be issued which summarises the most important issues and conclusions
- The following outputs will also be made available on the event page and/or [NSTF's YouTube channel](#):
 - Video recordings of speakers' presentations (subject to the speakers' agreement)
 - Presentation slides (if available and subject to the speakers' agreement)
 - Speakers' biographies
 - Useful links (feel free to let us know should you have any information that you would like us to consider posting here)
- NSTF will engage the media on possible interviews and/or articles
- NSTF will post on social media before, during and after the event: on [Facebook](#), [Instagram](#), [X](#), and [LinkedIn](#)

Anticipated impact: The discussion forum will contribute to:

- Greater visibility of the RS work already taking place across South African science councils, statutory bodies and research infrastructure organisations
- Improved understanding of RS as both a research output and an enabling component of the research ecosystem
- Stronger connections between local practice, international RSE developments and national policy discussions
- Increased awareness of the role of RS professionals and the need to recognise their contribution and skills
- More informed discussion about RS within open science policy and scholarly publishing

- Strengthened relationships and shared understanding among research organisations, government, infrastructure providers, publishers, practitioners and open science stakeholders
- A stronger foundation for coordinated RS capability development, building on NSTF's national convening role and UCT eResearch's leadership, expertise and practical experience in this field

References and background resources:

- van der Walt, A., Martin, K., Panji, S., Trusler, A., Vaccari, M., & Van Heusden, P. (2025). **Research software: A key (neglected) component of the digital research infrastructure ecosystem**. *South African Journal of Science*, 121(11/12). <https://doi.org/10.17159/sajs.2025/21437>
- OECD. (2021). **Recommendation of the Council concerning Access to Research Data from Public Funding**. <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0347>
- Barker, M., Cohen, J., Hernández Serrano, P. V., Katz, D. S., Martin, K., Rudmann, D., & Shanahan, H. (2025). **PRO4RS WG Final Report** (Version 1.0). Zenodo. <https://doi.org/10.5281/zenodo.17330928>
- Barker, M., Chue Hong, N. P., Katz, D. S., et al. (2022). **Introducing the FAIR Principles for research software**. *Scientific Data*, 9, 622. <https://doi.org/10.1038/s41597-022-01710-x>