RSMF Soft Launch

February 9, 2025

Project Overview

Vision

The Research Software Maintenance Fund supports projects that improve sustainability, reduce technical debt, and enhance community engagement.

Our project, *Enabling the Next Generation of Contributors to R*, aims to put the R project on a more sustainable footing.

Aims

1. Build collaboration between R Core developers and advanced contributors

2. Support broader engagement in R contribution.

3. Improve communication between R Core and the wider community.

4. Improve the sustainability of the R Foundation

WP1: Mentoring Expert Contributors

Mentees will dedicate ≥ 0.1 FTE, mentored by R Core

- Triage and Fix Issues

  - Permission to label and close bugs

  - Goal: >400 issues brought current

- Mentored Projects Supporting Maintenance/Development

  - Prioritise projects supporting overall aims

  - Outputs defined per project

WP2: Supporting Broader Engagement

- Develop and implement and a project wide Code of Conduct

- Evolve the development infrastructure

  - Improve Weblate administration and integration of translations

  - Pilot an enhancements discussion process

  - Explore options for integrated development platforms

- Maintain R Contributor initiatives (Office Hours, Sprints, Dev Days) and infrastructure (R Dev Guide, R Dev Container)

- Maintain links with EDIA groups (Forwards, R-Ladies, rainbowR)

WP3: Improving Communication

- Migrate R Contributor Slack to Zulip

- Pilot Discourse as an alternative to the r-project mailing lists

- Expand use of the R Project website, R Blog and R Foundation social media accounts to engage potential contributors

WP4: Sustainability of the R Foundation

- Propose new organisational structure enabling wider community representation

- Establish new channels for fundraising

RSEs/Community Managers

Heather Turner

Background

- PhD Statistics

- Worked in academia, industry and as a freelancer

- 5 year RSE Fellowship "Sustainability and EDI in the R Project"

R Project

- Package author, e.g. gnm, texor

- R Foundation activities: useR! organization, R Journal editor

- R Foundation member since 2015, e.g. Forwards, R-Ladies Global

- Established R Contribution Working Group in 2020

Ella Kaye

- Has been working with Heather on the RSE project

- Also came to R through statistics

- Packages

  - basepenguins: updating scripts to use new `penguins` data in base R

  - pregnancy: for calculating dates related to pregnancy

- Co-founded rainbowR community for LGBTQ+ folk who code in R.

- Contributing to R, especially as a result of mentoring novice contributors

Mentored Contributors - RSMF Funded

Gabe Becker

- PhD in statistics with Duncan Temple Lang

- Focused on statistical computing since

- Worked in the Bioinformatics Department of Genentech, now freelance

- Contributions to R include ALTREP, in collaboration with Luke Tierney

- Member of R Contribution Working Group, e.g. on selection committee for R Dev Days

Mikael Jagan

- Worked as research software developer at McMaster University

    - Mathematical epidemiology, inference for infectious disease models

- Co-author with Martin Mächler on Matrix package

    - Efficiency, classes with integer and complex data types

- Co-author of lme4 package with Martin Mächler and Ben Bolker

    - Generalized to support structured covariance

- Maintainer of flint: interface to Flint C library

    - Extend R with arbitrary precision

- Developed expertise in S4 and methods package as a result of maintaining above packages

Jeroen Ooms - Background

- Team member of Tidyverse

- Lead infrastructure at rOpenSci for 10+ years

- Lead developer for https://r-universe.dev

- Maintains 50+ CRAN packages: see https://jeroen.r-universe.dev

- Former maintainer of Rtools toolchains

Jeroen Ooms - Activities/interests

R-devel activities:

- CI tooling for base R, e.g. https://contributor.r-project.org/svn-dashboard/

- Maintain R SVN mirrors, e.g. https://github.com/r-devel/r-svn

- Helping Bioconductor modernize infrastructure based on r-universe

Some current ideas/interests:

- Help CRAN build for win-arm64 using free GitHub hardware

- Patches to improve install.packages() and friends

- Help R project integrate CI tooling, e.g. to test patches (aka PRs)

Mentored Contributors - Partner Supported

Michael Chirico (Google)

- Member of R Contribution Working Group

- PhD in economics

- Quantitative/statistical work in industry since

- Maintains internal infrastructure for R at Google (~2000 users)

- R package contributor: data.table and bit64 (64-bit integers in R)

- Translation: admin of Weblate, translations in data.table

- R contribution: several tens of patches to R

- Will split between translation infrastructure and bug fixes for RSMF

Mossa Reimert (A2-Ai)

- Was postdoc in veterinary epidemiology

- Now Senior Scientific Software Engineer at A2-Ai

- Developed tooling to interface Rust with R:

  - libR_sys binding library and extendr crates to interface R in Rust

  - rextendr package to scaffold extendr-powered R packages

- Interested in build process (e.g. make files), tidying C code

Kevin Ushey (Posit)

- Working on RStudio IDE (even now that Positron is being developed)

- Maintainer of renv for managing reproducible environments

Mentored Contributors - Non-RSMF

Lluís Revilla

- Working at Roche

- Bioconductor: package maintainer, Code of Conduct Committee

- R contribution:

  - Spanish and Catalan translation

  - R bugs, CRAN utilities

- Working Groups: R Contribution, R Package Repositories

R Core - RSMF funded

Simon Urbanek

- President of the R Foundation

- Associate Professor in Statistics, University of Auckland (previously AT&T)

- R Project: particularly responsible for Mac-related work
  - Mac binaries, Mac-builder, Mac GUI, Quartz graphics device

- R packages: notably rJava providing R/Java interface

- R Project infrastructure, e.g. Bugzilla, Etherpad

Ad-hoc Mentors

Paul Murrell

- Associate Professor in Statistics, University of Auckland

- Developed grid graphics system

  - Low-level plotting facilities

  - Basis for higher-level packages like lattice, ggplot2

- R Project: particularly responsible for graphics-related issues

- Mentor at R Dev Days helping novice contributors navigate C code underlying graphical functions

Deepayan Sarkar

- Professor at the Indian Statistical Institute, Delhi

- Creator of lattice graphics

- Work related to documentation

  - Converting Rd to HTML

  - Creating 1-page HTML reference manuals for packages (now shown on CRAN landing pages alongside PDF versions)

Other R Core

Martin Maechler - Background

- Role & Foundation

  - A founding member of the R Core Development Team (since 1997).

  - Current Secretary General of the R Foundation.

- The "Open Source" Catalyst

  - In 1995, Mächler famously persuaded R's creators (Ihaka & Gentleman) to release R under the GNU General Public License (GPL)

- Academic Background

  - Professor Emeritus and Adjunct Professor at ETH Zürich (Seminar for Statistics).

  - Personal Website: https://people.math.ethz.ch/~maechler/

Martin Maechler - Activities

- Expertise:
    - Numerical accuracy, robust statistics, high-performance computing.
    - Commit History: One of the most active contributors to base R.

- Community Support:
    - Manages dozens of R-related mailing lists, including R-help and R-devel.

- Developer Tooling
    - Project Leader for ESS (Emacs Speaks Statistics).

- Maintains Foundational "recommended" R packages:
    - Matrix: Support for sparse and dense matrix classes.
    - cluster: Methods for cluster analysis.

Contractors (Translation Infrastructure)

Fernando Corrêa

- PhD candidate and statistician at R6 in São Paulo, Brazil

- R6 is a data science consultancy firm in Brazil

  - Books, online courses, and blog posts for local community

  - Packages: including auth0 for Auth0 authentication in Shiny

- R6 staff have participated in several R Dev Days

- R6 will be the contractor for work on translation infrastructure

  - I will be the main developer

  - Other members of the Brazilian community will contribute, including Beatriz Milz

Gergely Daróczi

- R package developer, e.g. for logging transforming R objects into R markdown

- Community organizer: local R User Group and local conferences.

- Set up Weblate server as experimental platform for contributing translations to base R

  - Maintaining alongside Mike Chirico

Partners

Posit

- Represented at meeting by Hadley Wickham, Chief Scientist
- Providing support especially software engineering support through
  - Tidyverse Team
  - George Stagg (AI team)
  - Kevin Ushey (RStudio team)

A2-Ai

- Science and technology solutions company, especially in pharma & life sciences

  - Open source packages for analytics, technical writing, and visualization

  - Tools for package management and testing

- Providing support via

  - Mossa Reimert (general R contribution)

  - Devin Pastoor (AI review of CRAN packages)

R Consortium

- Represented at meeting by Terry Christiani, Executive director

- R Consortium is a group of business supporting the R project

- Support different projects in the R ecosystem via

  - Working Groups

  - Infrastructure Steering Committee grants

- Providing support for developer events, especially travel support

R Foundation

- R Foundation providing travel support for R Core members to attend related events

- Also acting as legal entity through which R Core members are providing support on a voluntary basis

rOpenSci

- Represented at meeting by Noam Ross, Executive Director

  - Runs software peer review process

  - Works in epidemiology and data journalism

- rOpenSci support

  - Contract of record for some of the freelancers working on the project

  - Share expertise in community building and outreach

Next Steps

Contract

- 2nd version of main contract between Birmingham and SSI under review

- Non-academic approved contractors will need to sign a form to declare recent UK/EU funding (NumFOCUS, Jeroen Ooms, Upshift R Kft and R6 Estatistica e Treinamenos)

- Contracts with all partners will follow

Mentored Cohort

- Mentees will be paired with personal mentors

    - Guide through the program

    - Meet approx monthly

- Bug components will be distributed amongst cohort

- Projects (currently in Google Doc) will be posted on https://github.com/r-devel/rsmf/

    - Mentees and mentors assigned/express interest

- Mentee to prepare Q1 plans in discussion with personal and project mentees

- Chat channel initially on Slack until Zulip ready

Translations work

- R6 will create a translations patch for R-4.6.0 using existing set-up.

- From learnings, outline plans to improve processes.

Other Work in Q1

- Launch Zulip

- Drafting CoC and associated protocols

- Planning for 2026 R Dev Days and Sprints

    - Rencontres R, Nantes, Fri 19 June

    - CascadiaR, Portland, Fri 26 June

    - useR!, Warsaw, Fri 10 July

    - Birmingham, 2-4 September

- Updates to R Foundation statutes accommodating online voting

- Ongoing events: Office Hours, participation in EDIA groups

Communication

- Quarterly reports required by funder

- Monthly main team meeting

  - ~8:30 UTC October - March

  - Alternating UK/NZ friendly times April - September

  - Short report-backs, discussion and look ahead

- Monthly R Contribution Working Group meetings for discussing outreach, development infrastructure and project governance

- Ad-hoc meetings on specific projects

Discussion