

# ZIH Colloquium

## RSE

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[10.6084/m9.figshare.21293790](https://doi.org/10.6084/m9.figshare.21293790)

# Please join BBB

- ✦ if you can
- ✦ <https://bbb.tu-dresden.de/b/har-0a6-col-lmy>

# me

- ✦ IST 00 -> Dipl-Inf (FH)
- ✦ 2009 at MPI-CBG
- ✦ 2016 1st RSE conference UK
- ✦ 2018 <https://de-rse.org/>
- ✦ full stack dev, ELN specialist and RDM supporter
- ✦ RSE catalyst



# Who is here?

- A. Fraunhofer
- B. Helmholtz
- C. HRK (TUD, HTW)
- D. MPG
- E. Leibniz
- F. other

# RSE

- ✦ Research Software **Engineers / Engineering**
  - ✦ Research Software
  - ✦ E\_engineering
  - ✦ E\_engineers
- ✦ community
- ✦ events

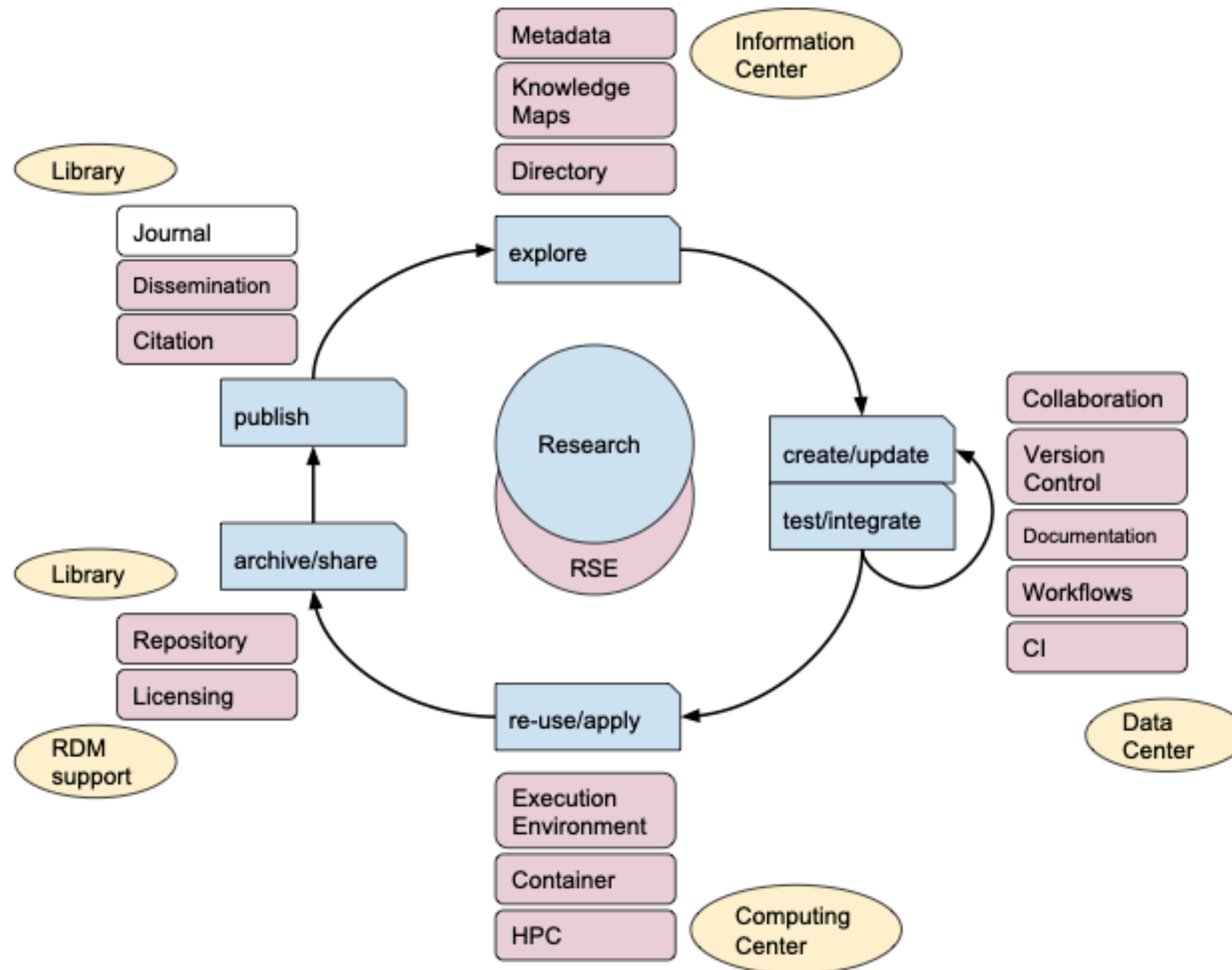
# RS - research software

	Proprietary	Open Source	something else
costs	+	--	?
effort	++	-- / ++	- / +
control	-	++	+
team	++	-- / ++	-
sustainability	-	+	-

# How old is your GSP policy?

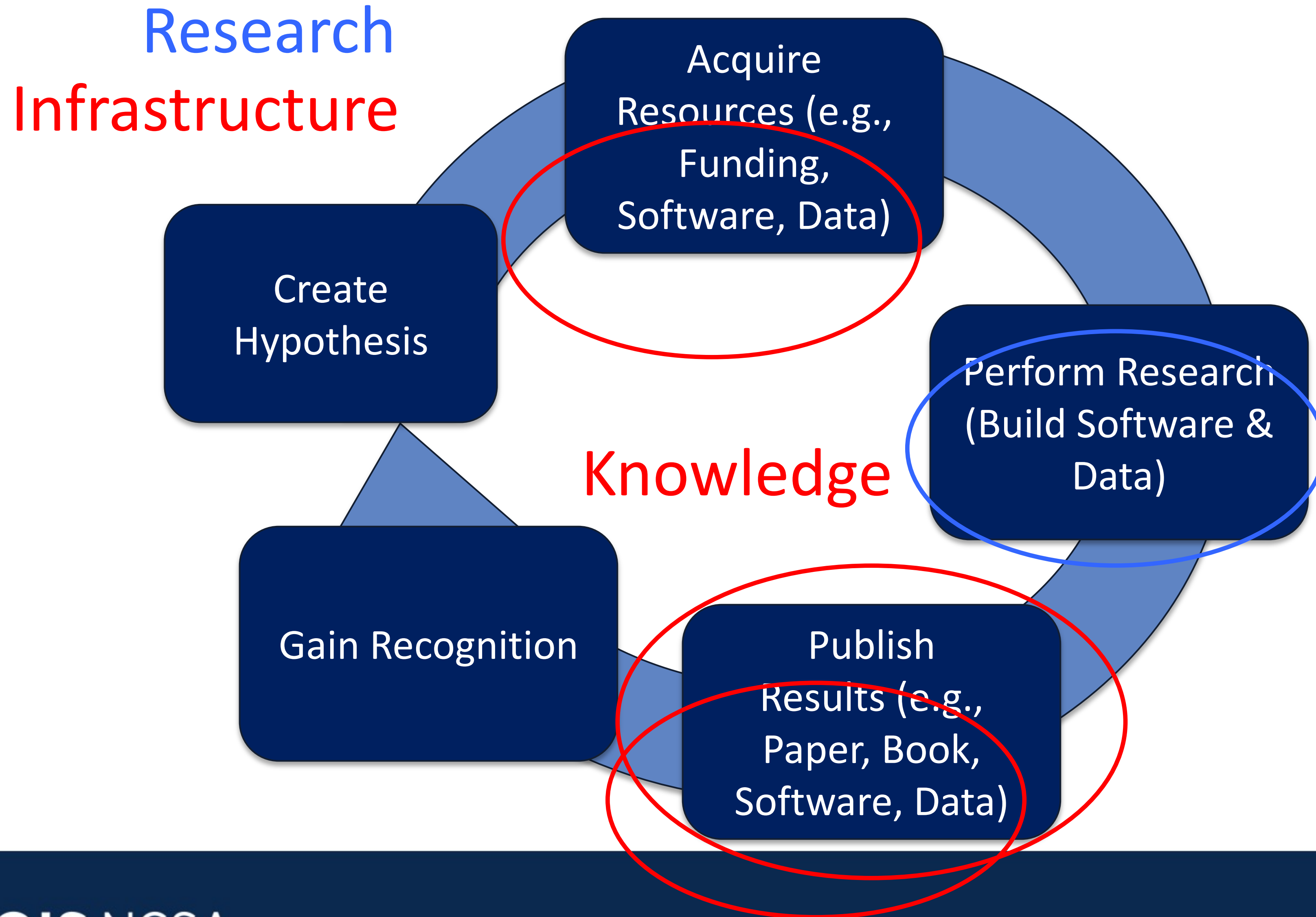
- A. 10 years and older
- B. less than 3 years
- C. don't know

# Engineering - activity





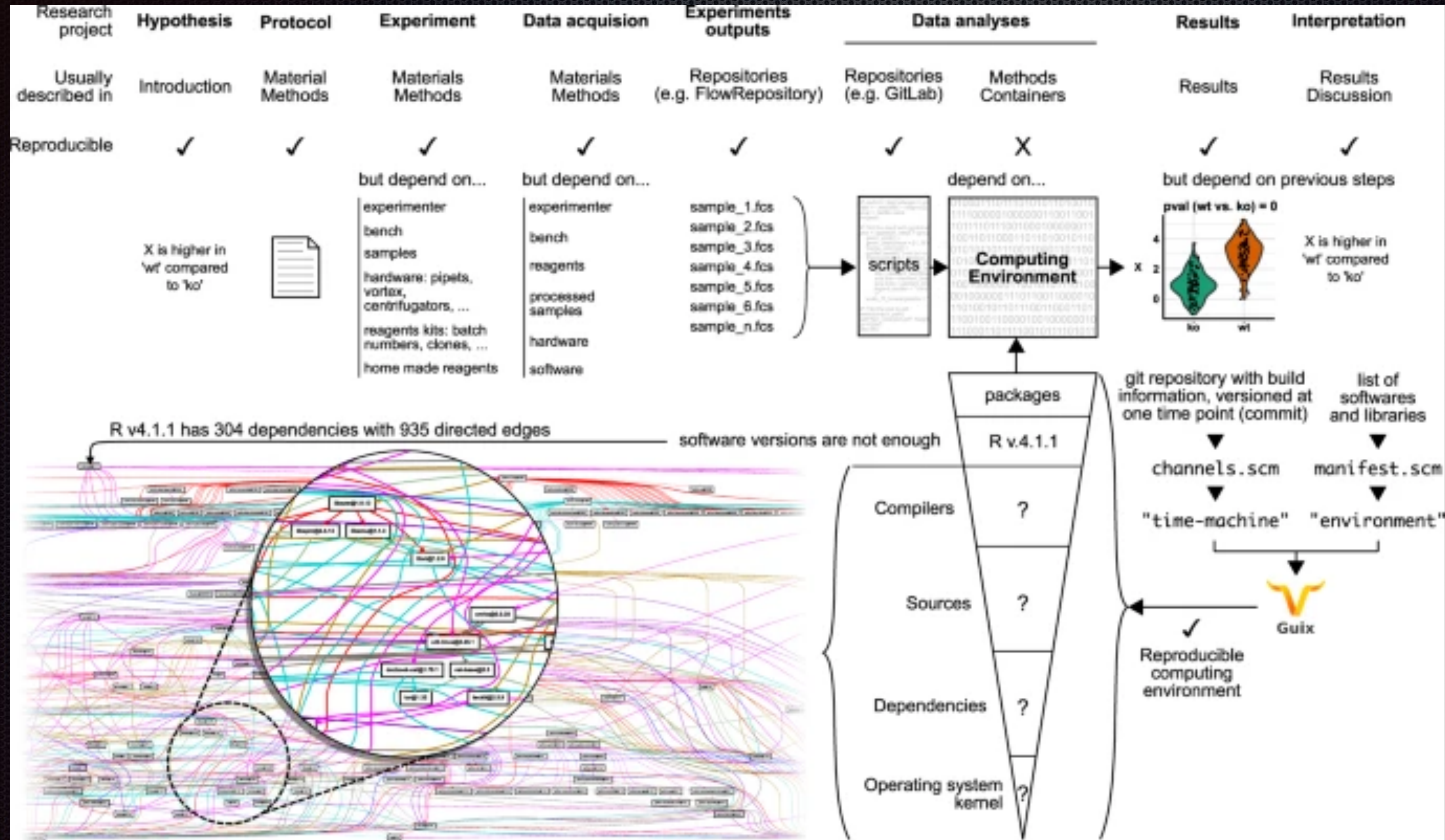
# Software in research cycle



# Artefact

- ✦ different maturity levels
- ✦ coexists with result, data, models, ...
- ✦ FAIR ?
- ✦ needs maintenance
- ✦ can YOU exit?

# Execution



Toward ....-term reproducible research using Guix  
<https://doi.org/10.1038/s41597-022-01720-9>

Do run 10 year old code of yours?

A. Yes

B. No

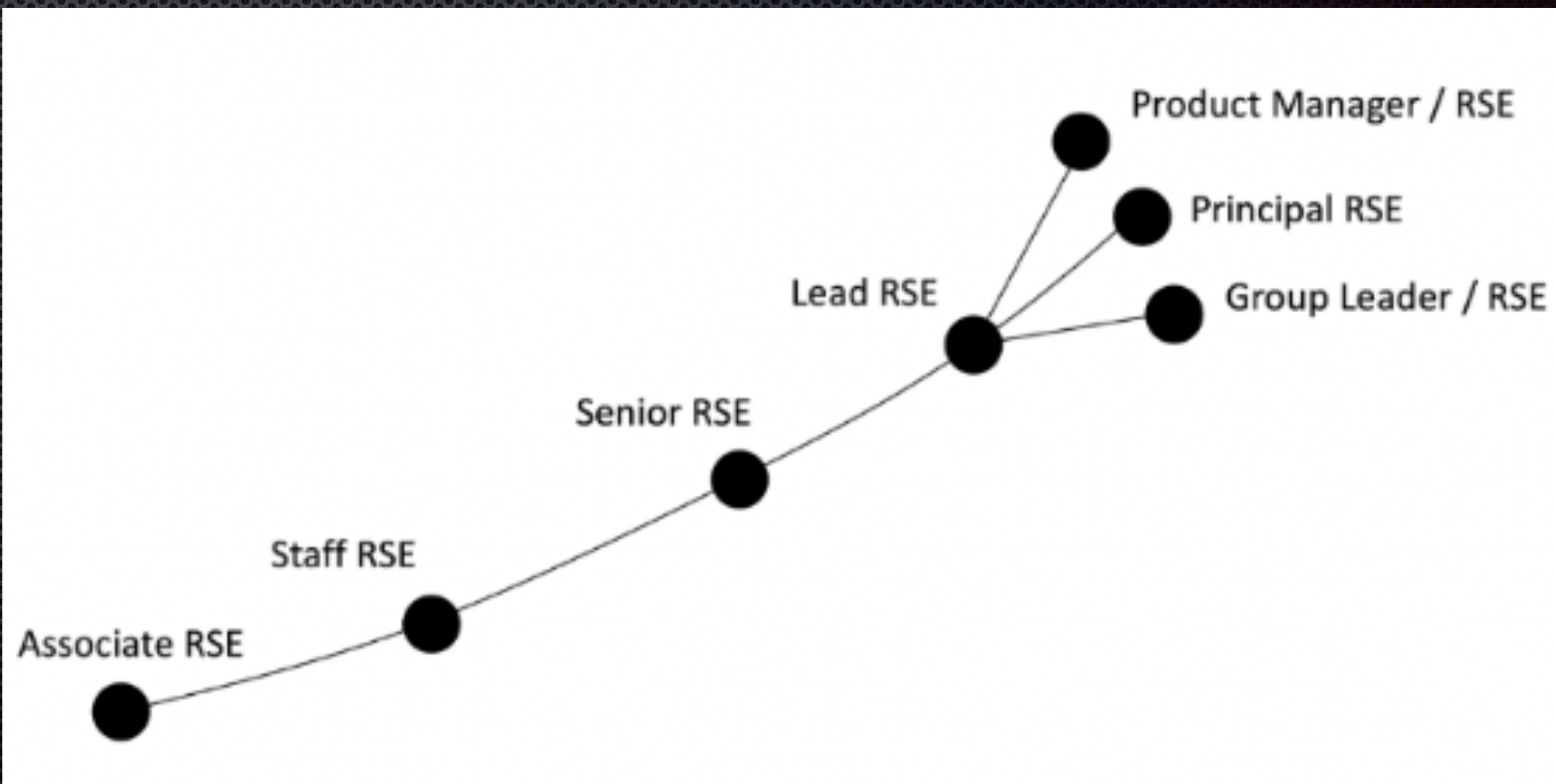
# Engineers

- ❖ term coined 10 years ago in UK
- ❖ domain  $\leftrightarrow$  software engineer
- ❖ not a job description
- ❖ intl. RSE survey 2022
- ❖ attract problems 🤯

Caribooks Project Editor (Research Assistant / Associate) Climate Researcher (Research Associate) Clinical Study Programmer CoMPLEx Research Associate Computational Biologist / Bioinformatician Computational Scientist Computational Scientist in Computational Fluid Dynamics & Industrial Applications Computational Scientist in Structural Mechanics and Industrial Applications Computer Scientist Computer Vision Researcher Content Developer / Programmer Control Engineer-IMG - 3 posts CREATE Data Specialist Data Analyst Data Integration Coordinator Data Manager x3 Database and Software Engineer Database Manager / Researcher Database Programmer Digital Media Technician E-Learning Portal Manager (KTP Associate) e-Learning Systems Development Analyst e-Learning Systems Development Analyst (Moodle, SQL) E-Learning Web Developer E-Portfolio Learning Technologist Embedded Systems Engineer Engineering Technician Environmental Scientist EPSRC Studentship on Algorithmic Construction of Finsler-Lyapunov Functions Experimental Officer in Bioinformatics Experimental Psychologist Finance Assistant Gaia Alerts Software Developer Gaia Software Developer (Gaia UK Team) GIS Applications Specialist Graduate Programmer / Software Developer Graphics Programmer Health Data Manager / Scientist High Throughput Bioinformatician High Throughput Sequencing Bioinformatician HIVE Manager / Co-ordinator HIVE Senior Researcher and Technical Lead Hydroinformatics Scientific Software Developer Instrumentation Systems Developer Instrumentation Engineer Investigator Statistician IT Developer (Linux / Windows Systems) IT Support Technician (Unix / Windows Systems) Knowledge Transfer Partnerships (KTP) Associate - Software Developer KTP Associate - Robot Vision Scientist (Research Fellow) KTP Associate (Fixed Term Contract for 24 months) KTP Associate (Precision Agriculture Data Analyst) KTP Associate IC<sup>2</sup> Graduate Web Developer KTP Associate: Electronics / Robotics Engineer Learning Technologist Leicester Respiratory BRIT Developer Linux / C++ Programmer Linguist Maker Space Technician Marie Curie Early Stage Researcher Marie Curie Early Stage Researcher in Earth Observation Modelling Marine Earth Observation Scientists Medical Statistician Medical Statistician / Senior Research Fellow Mobile Application Developer NASC IT Support - Programmer and Systems Administrator (Fixed Term Contract) Research Fellow DRA on EU Project on Automated Multisensor Surveillance Planning Officer Policy Modeller 2019 Post - Doctoral Research Assistant INSTRON Post Doctoral Research Worker Post Doctoral Researcher in the application of Digital Technology Post-Doctoral Research Assistant in Simulation and Visualization Post-Doctoral Research Associate Post-Doctoral Research Associate (Pathogen Genomics) Post-Doctoral Research Fellow Postdoctoral Fellow - population genetics / evolutionary genetic Postdoctoral Fellow in Bioinformatics Postdoctoral Fellow in Cancer Therapeutics Postdoctoral Research Assistant Postdoctoral Research Associate Postdoctoral Research Fellow Postdoctoral Research Scientist Postdoctoral Researcher in Declarative (Logic and Functional) Programming Postdoctoral Researcher Postdoctoral Scientist Postdoctoral statistician Postdoctoral Training Fellow - Statistical and Computational Genetics of Autism Principal / Senior Bioinformatician Principal Bioinformatician Product Development Engineer (Rail) Publishing Portal Web Developer Radio Frequency Engineer Reader in Computer Science Reporting Analyst Research (Software) Engineer Research Assistant Research Associate Research Fellow Research Image Data Manager, Biomedical Engineering Research Officer Research Officer IC<sup>2</sup> Social Protection Research postgraduate Research Programmer Research Scientist Research Scientist / Senior Research Scientist Research Scientist in Machine Learning and Computer Vision Research Software Developer Research Software Developer for the Herchel Smith Professor of Organic Chemistry Research Software Engineer Research Studentship Research Worker Researcher SAP Trainee Technical Analyst Scientific Officer with Michela Garofalo Scientist SEAHFA Studentship: Extracting epidemiological data from collections SEEG Data Archive Manager Senior / Research Associate in Clinical Integration and Image Analysis for Fetal Surgery Senior Analyst Programmer (Business Analysis) Senior Analyst / Programmer Senior Bioinformatician Senior Bioinformatician / Bioinformatician Senior Computational Statistician - Spatial Models Senior Data Acquisition Scientist / Data Acquisition Scientist Senior Data Manager Senior Database Administrator Senior IT Developer Analyst Senior Mathematical Modeller / Data Media Developer Senior Postdoctoral Researcher - Evolutionary and Computational Analysis of Infectious Disease (Phylodynamics) Senior Research Assistant Senior Research Associate Senior Research Associate IC<sup>2</sup> Molecular Modelling & Simulation Senior Research Associate in Quantitative Clinical MRI Senior Research Fellow Senior Research Fellow / Research Fellow in Vibration Diagnostics and Prognostics / Digital Signal Processing Senior Research Laboratory Technician Senior Research Technician Senior Software Developer in Bioinformatics Senior Software Engineer / Software Engineer Senior Statistical Epidemiologist Senior Systems

194 different job titles

Simon Hettrick



# Can you get the number of coders @work?

A. Yes

B. No

C. well...

# Community scopes

here

ZIH

local

TUD

regional

DRESDEN-concept

federal

Saxony

national

de-RSE e.V., <https://www.allianzinitiative.de/>  
monthly call

international

RSE council, RESA

# Problems


- ✦ “Our software needs a maintainer! I can’t handle that anymore.”
- ✦ “We need to communicate about features and future. How to get a community manager?”
- ✦ “My software needs 3 months of maintenance. Do you know a proxy which could apply for funding hiring somebody?”



# Infrastructure behind infrastructure

- ✦ <https://rsetoolkit.github.io/>
- ✦ NFDI
  - ✦ section common infrastructure - wg RSE
- ✦ EOSC
  - ✦ EOSC Task Force on Infrastructures for Quality Research Software
- ✦ RDA/RESA

# Events

- ✦ 2022 Oct 13th - 2nd international RSE day
- ✦ 2022 November - monthly community call
- ✦ 2023 February - deRSE23 - conference in Paderborn 
- ✦ 2023 September - un-deRSE23 - unconference/workshops in Jena

# Dresden chapter?

- ✦ What?
- ✦ Why?
- ✦ When?
- ✦ Who?



<https://de-rse.org/chapter/>

Dankeschön!

# Community - never walk alone

✦ de-RSE

✦

