Research Software Engineer Kick-Off Meeting

Buiding a research software engineer community

Elsa Germann, Achim Gsell
PSI, May 7th 2025

Agenda

1. Welcome
2. (Short) introduction
3. Keynote Tarun Chadha, Uwe Schmitt
4. Questions/discussion
5. Next steps

Welcome

Who are we?

- Elsa Germann, HPC System Engineer: Merlin7, Spack, ICON (GPU programming)
- Achim Gsell, System Engineer: AFS, Pmodules, OPAL (tool for particle simulation) H5hut (library to handle particle data in HDF5 files)

Speakers

- Uwe Schmitt (ETHZ Scientific IT Services, software and data management)
- Tarun Chadha (ETHZ Scientific IT Services, data scientist/machine learning)
- Built up RSE community at ETHZ
- Supporting the growth of the movement inside the ETH domain and Swiss universities

Invitation send to all Gitlab/Gitea users: 64 accepted; Tentative: 33

Introduction

Objectives

- Build a RSE community at PSI
- Establish best practices for research software development @PSI
- Connect RSE communities in the ETH domain and Swiss universities

Funding:

- Project in the Open Research Data (ORD) measure 2 program. See https://openresearchdata.swiss
- RSE4ORD – building a research software engineering community to promote open science
- ETHZ, EPFL, PSI, Empa, WSL, EAWAG
- Total budget CHF 254’500 (matching funds: ETH Board CHF 127’250.-.)

Introduction: Information channels

Mailing list

- Please subscribe via Web-frontend:
  `https://psilists.ethz.ch/sympa/info/rse`
  or by sending an email to
  `sympa@lists.psi.ch`
  with the subject
  `subscribe rse@lists.psi.ch first_name last_name`
- Discuss RSE related topics, question, announcements etc.

PSI Aktuell

- Announcements of meetings/activities

Webpage

- Not yet

Next steps

- Organize an onsite event at PSI for everybody interested in RSE
- Meeting with group heads and supervisors of PhD student
- Ideas are welcome!

The RSE movement

An initiative to emphasize the importance of software in research and academia

Uwe Schmitt, Tarun Chadha, Scientific IT Services ETH Zurich

Is software development in academia as good as it could be?

Do you think that software is important in modern research?

Who of you had software development related education beyond a programming language introduction?

Do you think software development is appreciated enough in research compared to e.g. paper publication?

These problems were identified and about 10 Year ago in the UK.

Actions taken

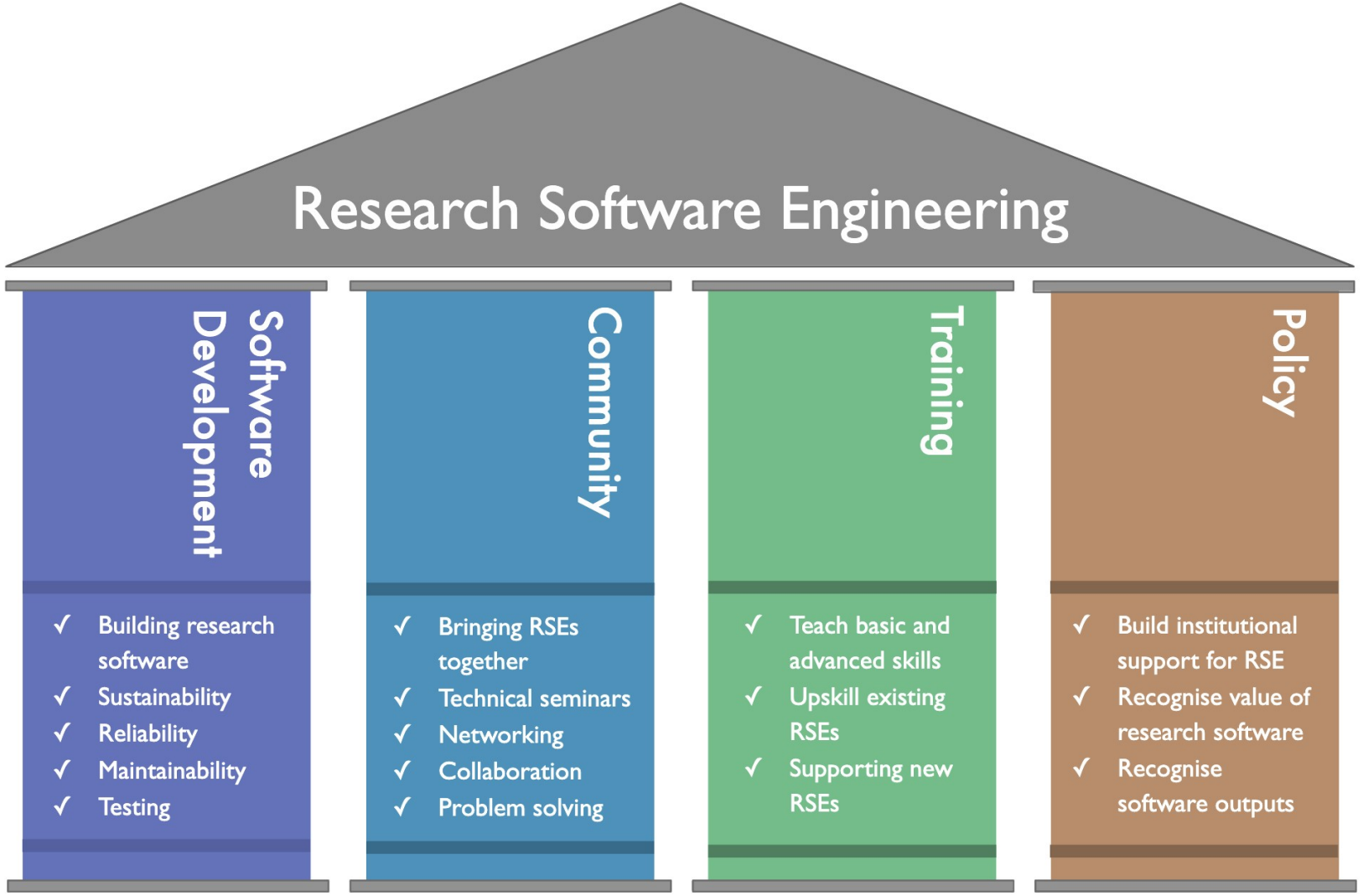
Give all people in academia who write code an identity by providing a name

RESEARCH SOFTWARE ENGINEER (RSE)

Who is an RSE?

Motivations:

- To provide a unique job title that is easier to search for and to advertise than all the little variations like “scientific programmer”, “research software specialist”, etc.
- To highlight the importance of software (especially sustainable software development) and those who develop it in modern research.
- To create communities of like-minded people who share common interests.



"The Four Pillars of Research Software Engineering"
https://dl.acm.org/doi/10.1109/MS.2020.2973362

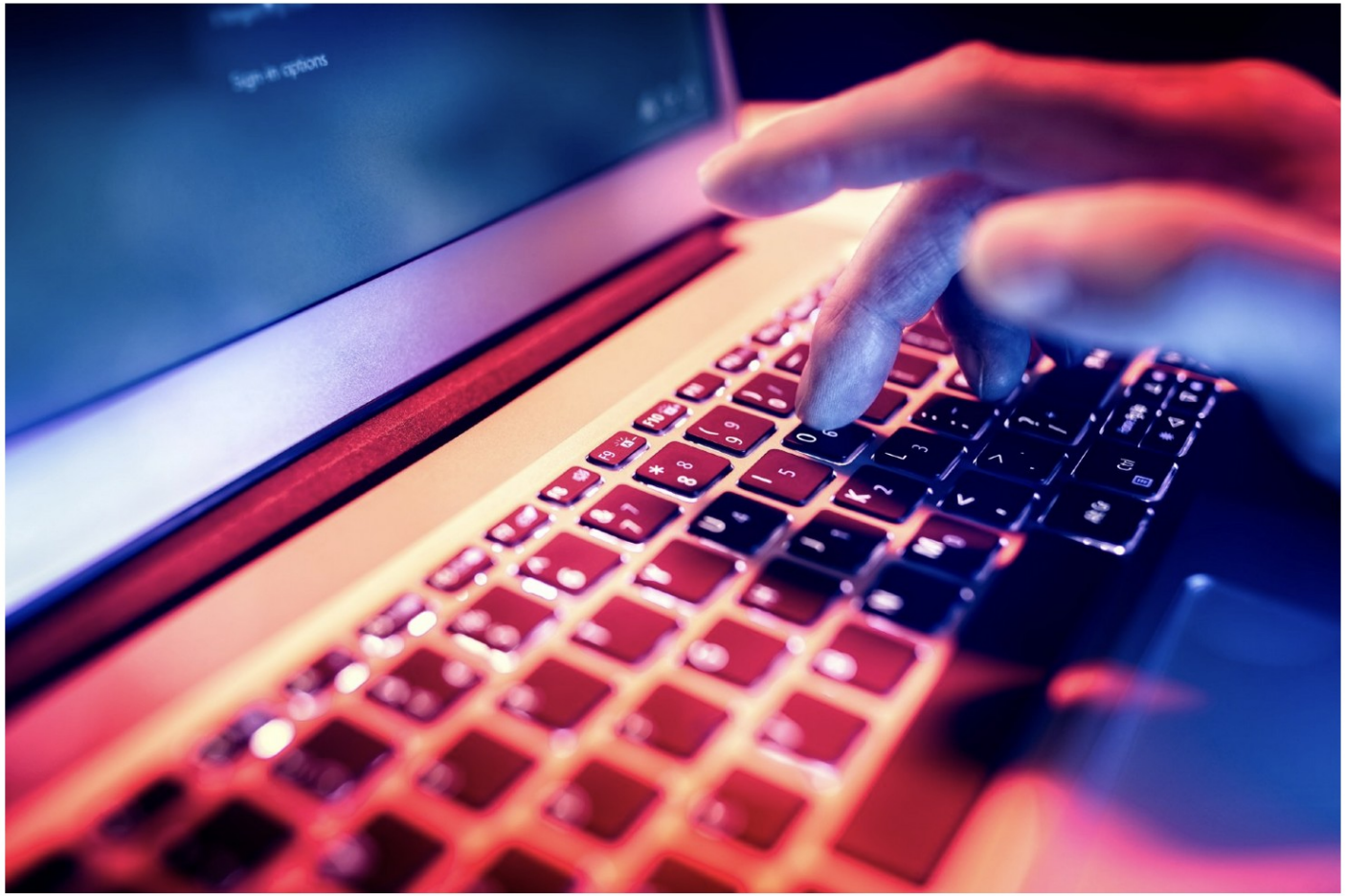
Our history with The Carpentries

The Institute became involved with what was then **Software Carpentry** (now a lesson programme within The Carpentries) in 2011 by developing online lectures in advanced shell tricks and systems programming in Python. In April 2012, we participated in **the first UK Carpentry workshop**, led by the Software Carpentry's creator, Greg Wilson, at the University College London. A fortnight later, in conjunction with the **Digital Institute** at Newcastle University and **SoundSoftware**, we delivered the **first workshop run entirely by UK instructors**, independent of Greg Wilson's team.

We have since been involved in a large number of workshops run in the UK and helped to deliver workshops worldwide. In February 2013, **we volunteered to coordinate Software Carpentry activities in the UK**. In early 2015, soon after the set up of the **Organisational Membership** scheme, we became a Software Carpentry Foundation Partner, a partnership which has now moved to The Carpentries. We inspired and helped many UK organisations and groups to start delivering Carpentry workshops and explore their individual partnerships with The Carpentries.

https://www.software.ac.uk/our-training-services/our-partnership-carpentries

UKRI continues investing in improving research software practices



Subscribe to UKRI emails

Keep up to date with funding, news and events, and a weekly newsletter.

Subscribe

30 August 2024

https://www.ukri.org/news/ukri-continues-investing-in-improving-research-software-practices/

RSE CON 24

About Programme Socials

Search...

Sept 03-05, '24 ✦ Newcastle, UK

RESEARCH SOFTWARE ENGINEERING CONFERENCE

Join us in September 2024 for the eighth annual conference for Research Software Engineering

https://rsecon24.society-rse.org/

2015

New network to support Research Software Groups across the UK

Posted by s.hettrick on 7 August 2015 - 10:30am

https://www.software.ac.uk/blog/new-network-support-research-software-groups-across-uk

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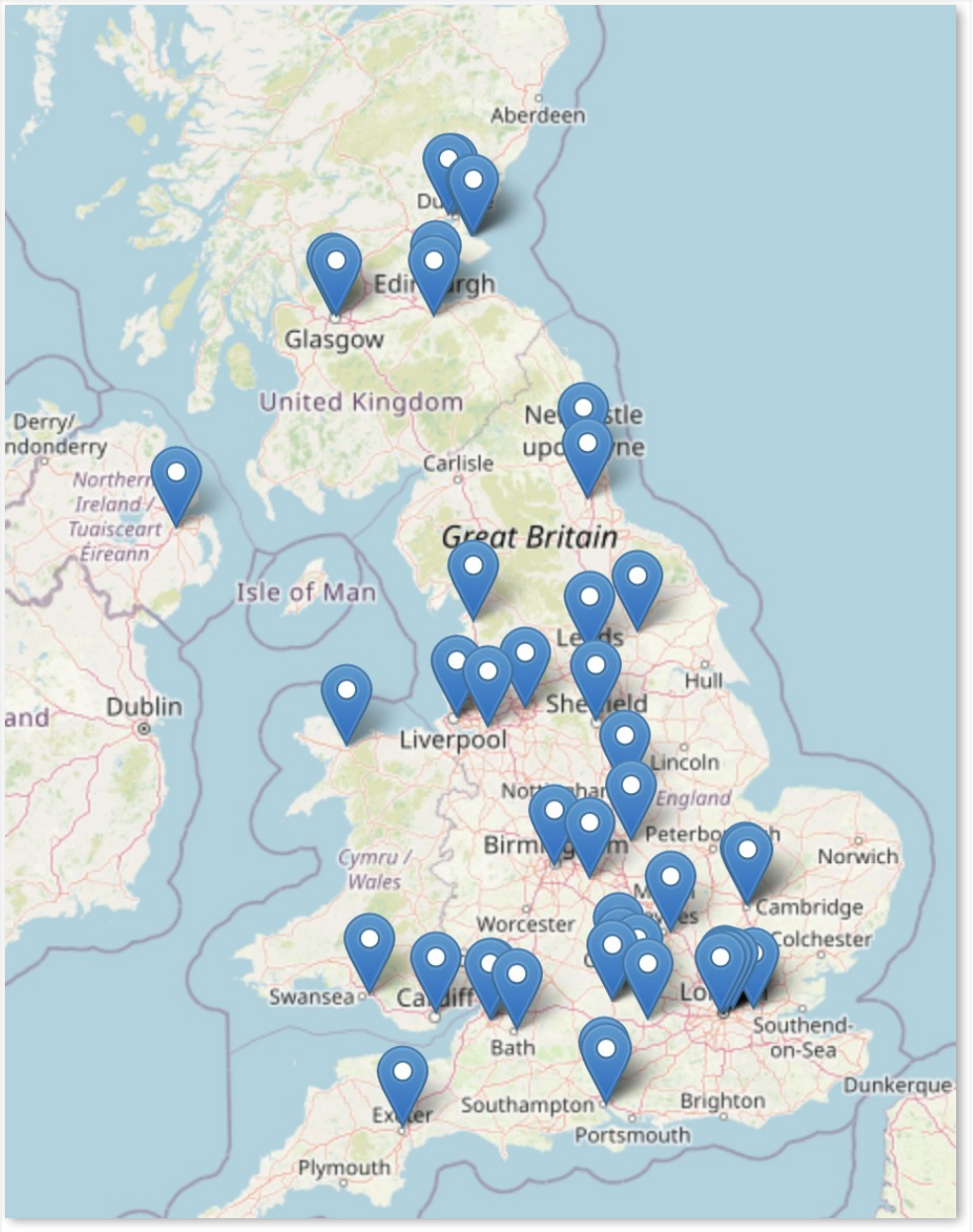


https://www.software.ac.uk/blog/new-network-support-research-software-groups-across-uk

The national associations around the world as at 2023. (image courtesy of Ian Cosden, US RSE Association).

https://www.fz-juelich.de/en/rse/about/rse-worldwide

RSE community buildup in Switzerland

RSE community @ ETH: first steps

- Mail campaign on the 23rd of November 2023
  - Emails to both research and technical staff
  - Incredible response
- Announced 1st online information event on 12th of December 2023

1st online information event

- Around 120 participants
- 2 parts:
    1. Talk by Prof. Simon Hettrick (Software Sustainability Institute UK)
    2. Information on community building @ ETH
        - RSE community survey
        - Q&A

Results of RSE community survey

13 out of 16 ETH Zurich departments represented!

First on-site event: 1st of February 2024

- **Part 1: Lightning talks**
- **Part 2: Talk by Mr. Peter Schmidt**
- **Part 3: Discussion rounds in small groups:**
  - What do you expect from the RSE community?
  - What kind of role do you imagine for yourself in this community?
  - How can we build the community?

Reactions:

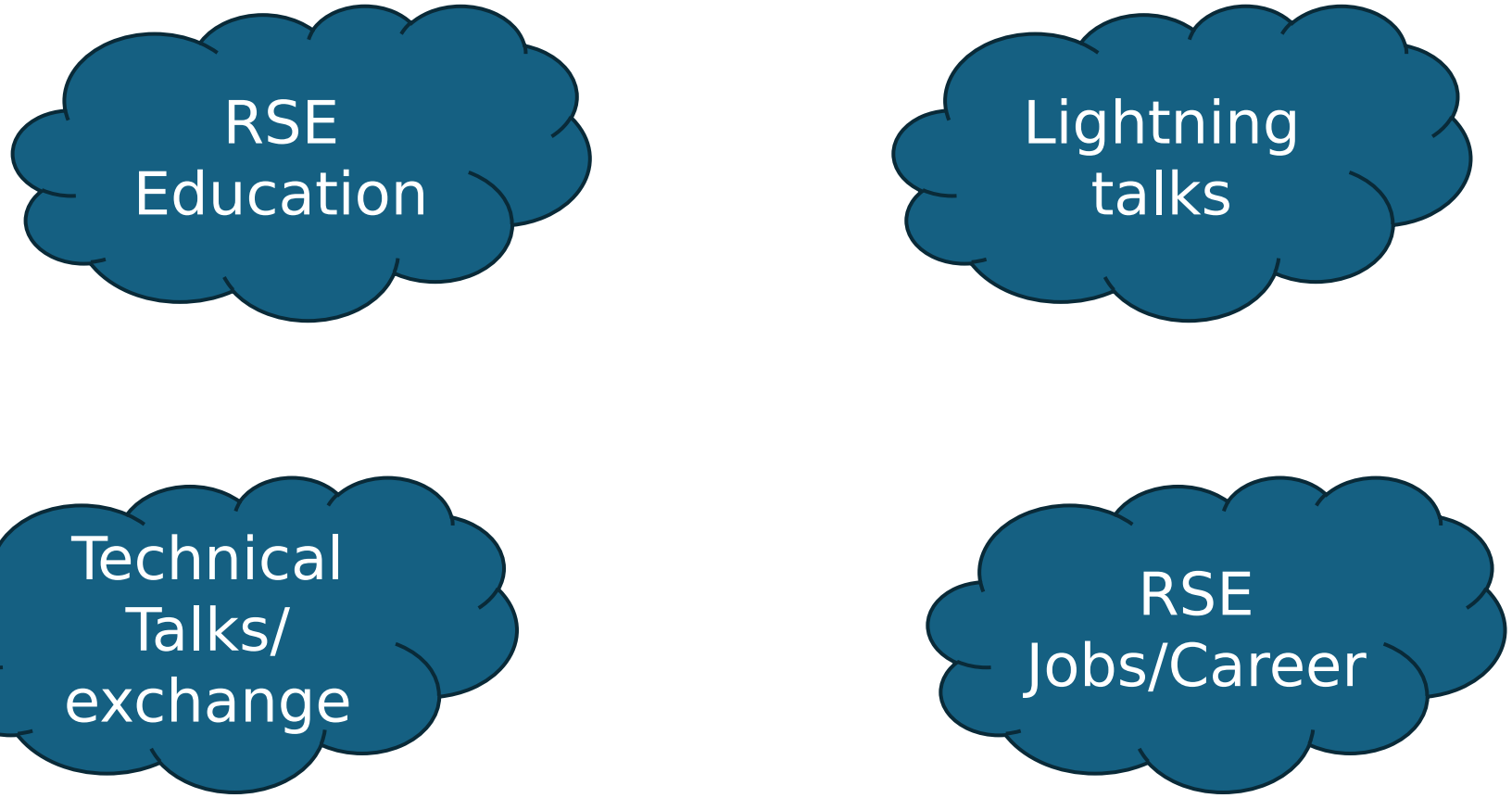
- **EPFL Lausanne**: we also want to do something!
- **KOF Swiss Economic Institute**: We were just about to set up something of our own!

- ~ 65 at first on-site event
- 339 members on mailing list
- > 100 on matrix chat

Focus

- Establishing the community at ETH Zürich
- Organizing regular events
- Keeping the community engaged
- Introducing the community at partner institutions (ETH Domain)

Community events



Community events

- “Basics of computing environments for scientists” by IT Service group D-PHYS
- Planning Git basics and advanced workshop with a colleague from CSCS (Swiss National Supercomputing Center)
- Plans on starting a book club together with other RSE communities such as RSE Germany

Community events

- Group discussions about “automated testing”
- Presentations about “devbox” and “pytest-regtest”
- Scientific and Technical Publishing with “Quarto” – from reports to books and ebsites
- “Show your tools”

Community events

- Applying for RSE Jobs: Panel discussion

Community events

- Applying for RSE Jobs: Panel discussion
- Community contributed blog article on lessons learned

ETH Domain

RSE@ETH Domain

- We, together with the partner institutions in the ETH domain, submitted a proposal for funding to ORD measure 2, which was accepted

- RSE4ORD: building a research software engineering community to promote open science

RSE4ORD:

- Project started October 2024: 0.75 FTE/year for 2 years
- Kicking-off RSE communities at partner institutions: RSE@ETH will help get started
- Promoting FAIR (Findable, Accessible, Interoperable, Reusable) for research software
- Guidelines for RSE

Collaboration with the EnhanceR network

- EnhanceR* - a network for Swiss Research IT expertise
- Call for RSE ambassadors:
  - Simon Duerr - HEVS
  - Viktor Kovtun - Uni Bern
  - Ilya Misyura - FNHW
  - Andrei Plamada - Uni Zürich
  - James Runnalls – Eawag

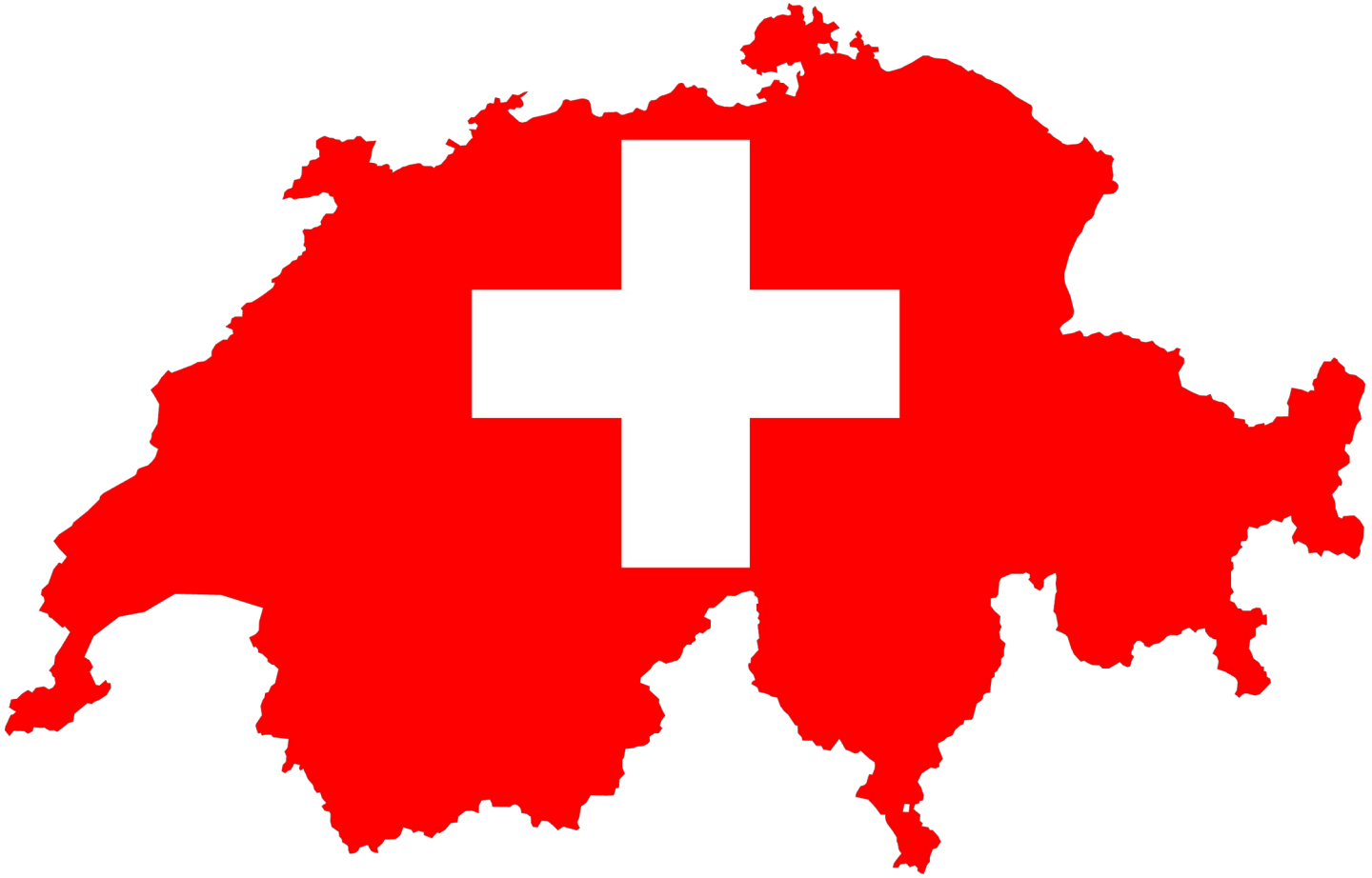
*https://www.enhancer.ch/

Collaboration with the EnhanceR network

- EnhanceR symposium* on "RSE in Action" on 4th September 2025 in Fribourg, Switzerland
- Call for contributions: Workshops, show and tell sessions...

*https://symposium.enhancer.ch/

Swiss RSE event: 2026



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