OSSR Open Collaboration Meeting 16/17th of November 2023

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ESCAPE - The European Science Cluster of Astronomy & Particle Physics ESFRI Research Infrastructures has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement n° 824064.

Slides for Session: **Policy & Strategy**

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Points for the next 1.5 days

- Policy & Strategy:
  - Thursday:
    - Introduction - ESCAPE Collaboration
    - RSD - as front page of OSSR: automatic or opt-in model, push & pull approach
    - Onboarding: who to intensify and incentivise
  - Friday:
    - OSCARS, EVERSE introduction
    - Gathering of interests and needs of ESFRIs (along task areas - provide guiding questions before)
      - alignment with OSCARS calls
      - alignment with EVERSE tasks
- Technial Discussions:
  - Zenodo Update
  - Hackaton:
    - Onboarding Workflow
    - Issue & MR Closing on eOSSR Library
- Onboarding:
  - onboarding talks - no current new onboardings

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Future of ESCAPE

reminder

- ESCAPE transforms into the **ESCAPE Open Collaboration**
  - Partners use reasonable endeavours to achieve the objectives
  - Work managed according to workplan and current organisational structure
  - Partners contribute the time and effort necessary to complete the work
- Work Plan (currently) with 12 points
  - Common infrastructure, **repository and catalogue for software**, VRE, collaborative operations, citizen science, advanced technologies, HPC community, **virtual software institute**, career development, science projects, European Strategy for Data
- Strive to include new partners
  (e.g. for onboarding following “train the trainers”)

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ESCAPE EOSC to cell evolve to

reminder

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ESCAPE Collaboration: Current Status and Next Steps

- Collection of interests and contact persons from all participating ESFRIs/institutions done
- ESCAPE Review Paper in Draft – currently on hold (was planned for Summer in as open letter to ORE)
- First common meeting of (old) ESCAPE Executive Board and new E-C Executive Board on 27/11
  - participants: coordinator of a working group or scientific-technical coordinator-representative of one of the ESCAPE Research Infrastructure members;
  - This meeting will be mainly dedicated to share information about the activities and organisation of the working groups, interfaces with Horizon Europe/other projects funded in support of ESCAPE's work programme, and to organise the election of the Technical Coordinator (who will be the EB chairperson).
- **ESCAPE Project Scientist vacancy**

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ESCAPE Collaboration: Current Status and Next Steps

Executive Board (EB) - tasks from the collaboration agreement

- *The EB reports to the Strategy Board (SB).*
- *The members of the EB are the technical coordinators (or equivalent) of the RIs in the collaboration and leaders of implementation working groups. The chairperson will be nominated by the members. The chairperson will become the Technical Coordinator of the collaboration, and will have a term of 2 years, renewable.*
- *The role of the EB is to*
  - *Propose to the SB and coordinate agreed technical collaborative projects between the RIs;*

    This can include but is not limited to work on common software, infrastructure, services, etc.

    The work will be executed through setting up and overseeing working groups with members drawn from the RI's as needed, and leaders of any eventual work package structure who would also be members of the EB.
  - *Technical coordination with the EOSC and EOSC-related projects.*
- *The EB will meet monthly or as required.*

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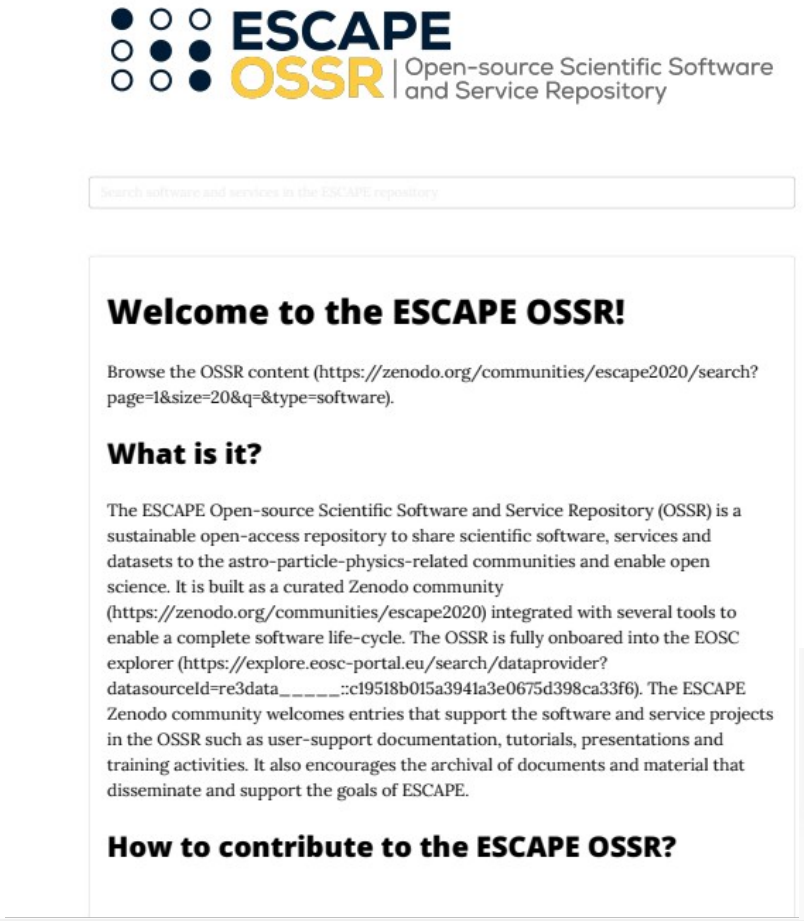
OSSR Current Status



- Entry page
- Repository:
  - Zenodo Community
  - EOSC Portal Explorer
  - OpenAIRE
- Development Platform:
  - https://gitlab.in2p3.fr/escape2020/wp3
  - https://gitlab.com/escape-ossr

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Current Activities

- OSCARS and EVERSE: see presentations tomorrow
- Events: CERN Open Source Programme Office (OSPO) Inauguration https://indico.cern.ch/event/1327562/, 28/11
- SciCodes activities continue (e.g. CodeMeta v3 crosswalks)
- OSSR paper
  - Has been submitted and published: https://open-research-europe.ec.europa.eu/articles/3-46/v2

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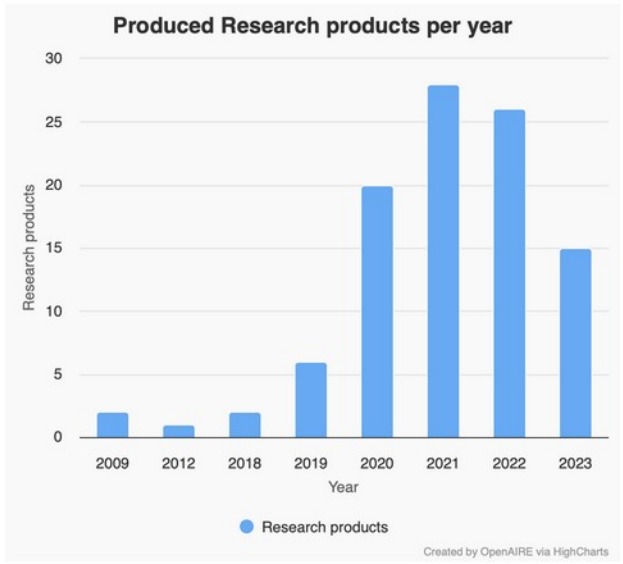
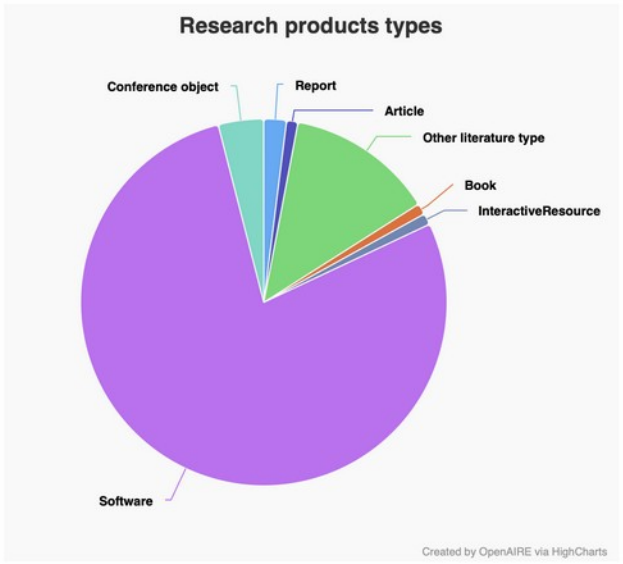
OSSR Onboarding

STATISTICS

Statistics from [EOSC Portal]





- How to intensify the onboarding and incentivise colleagues to onboard software?
  - Outreach material
  - Reach into the collaborations/RIs
- Are all Onboarding steps still valid and necessary?

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Onboarding incentives

Why?

- Visibility → need to increase
- Credibility → need to certify
- Community → need to intensify
- Interconnectivity → do we build towards this?

Who?

- ESCAPE partners
- Other collaborators
- Wider community

What?

- Provide XXX for YYY

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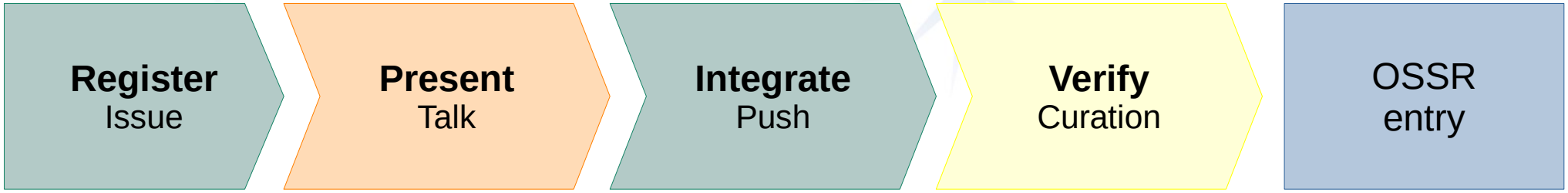
Onboarding procedure



Community

- Create extended form?
- Forum in collaboration meetings?
- …?

Credibility

- Certification?
- Check also presentation of software

Visibility

- Gallery?
- Interfaces?
- …?

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What to provide

For members

...?

For community

...?

… and how to distribute?

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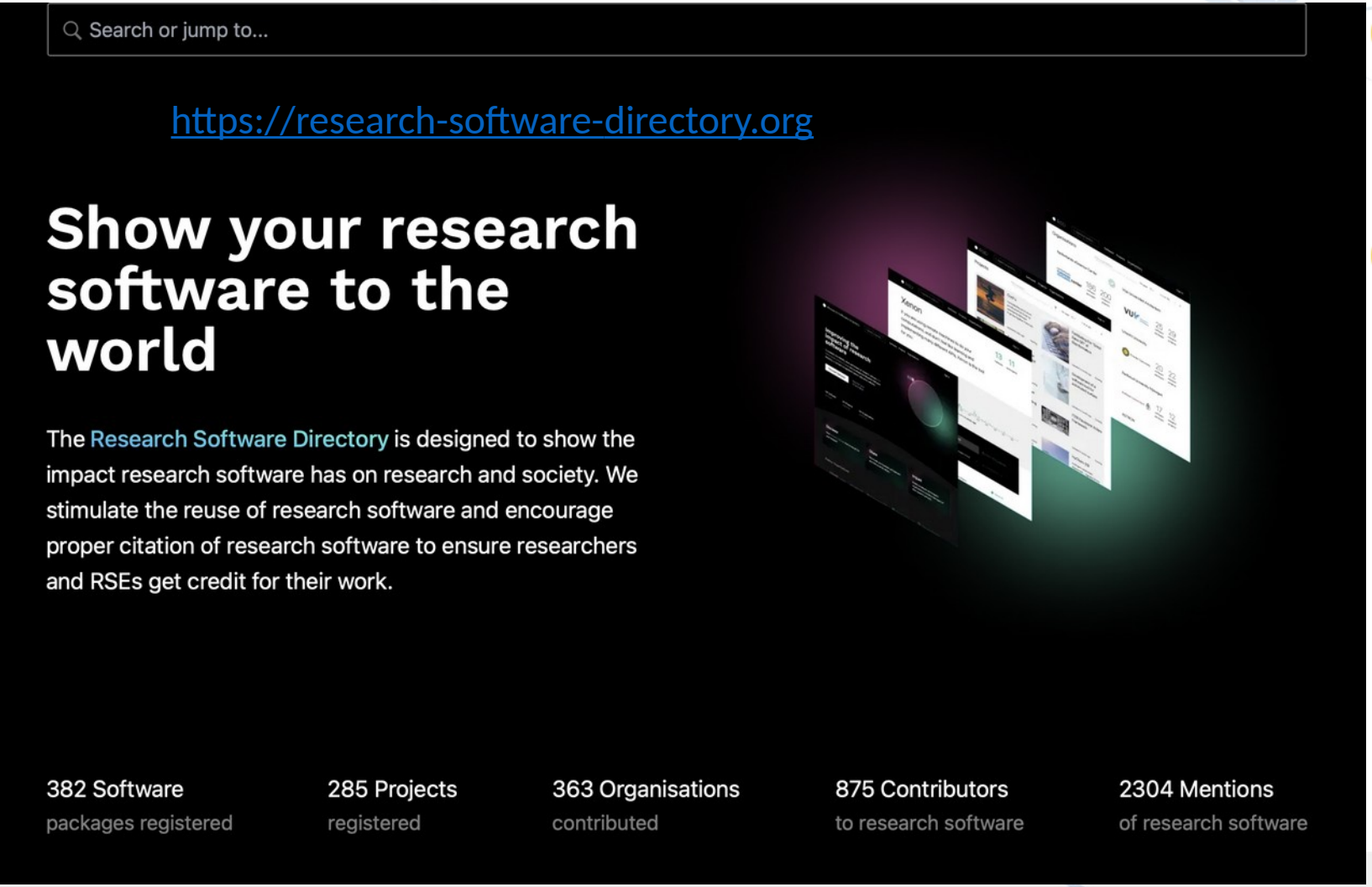
RSD as OSSR Frontend



- Also an instance at https://helmholtz.software/software
- OSSR-related: FairMQ Example entries:
  - RSD: https://helmholtz.software/software/fairmq
  - CodeMeta: https://github.com/FairRootGroup/FairMQ/blob/master/codemeta.json

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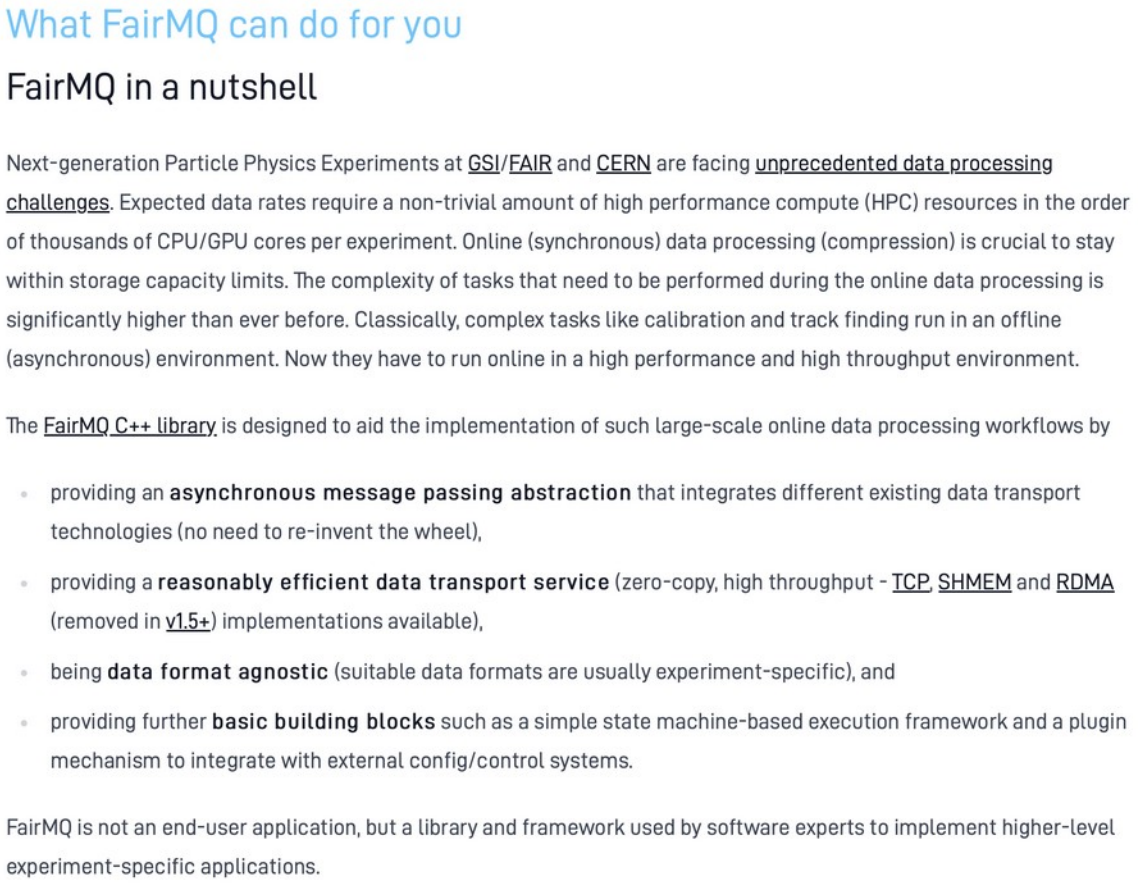
RSD as OSSR Frontend



What FairMQ can do for you

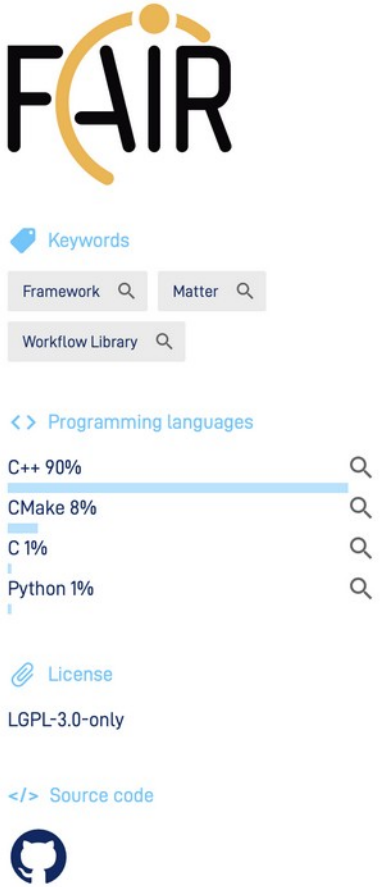
FairMQ in a nutshell

Next-generation Particle Physics Experiments at GSI/FAIR and CERN are facing unprecedented data processing challenges. Expected data rates require a non-trivial amount of high performance compute (HPC) resources in the order of thousands of CPU/GPU cores per experiment. Online (synchronous) data processing (compression) is crucial to stay within storage capacity limits. The complexity of tasks that need to be performed during the online data processing is significantly higher than ever before. Classically, complex tasks like calibration and track finding run in an offline (asynchronous) environment. Now they have to run online in a high performance and high throughput environment.

The FairMQ C++ library is designed to aid the implementation of such large-scale online data processing workflows by

- providing an **asynchronous message passing abstraction** that integrates different existing data transport technologies (no need to re-invent the wheel),
- providing a **reasonably efficient data transport service** (zero-copy, high throughput - TCP, SHMEM and RDMA (removed in v1.5+) implementations available),
- being **data format agnostic** (suitable data formats are usually experiment-specific), and
- providing further **basic building blocks** such as a simple state machine-based execution framework and a plugin mechanism to integrate with external config/control systems.

FairMQ is not an end-user application, but a library and framework used by software experts to implement higher-level experiment-specific applications.



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  FairMQ Example entries:
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  - CodeMeta: https://github.com/FairRootGroup/FairMQ/blob/master/codemeta.json
- RSD developers supportive (3 meetings)
  - Generation of community
  - Metadata cross-walk
  - Development of API and pull mode

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RSD as OSSR Frontend: Decisions

- Use RSD as OSSR Frontend in general?
- Should the usage be opt-in?
- Use in push mode or pull mode?

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Slides for Session:
OSSR future, relation with other projects

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Mission goals

- Goals & Mission statement for OSSR final workshop
  - Continue to maintain the OSSR
  - Collect software to provide additional visibility and citeability; strengthen software competence with quality in focus
  - Use of OSSR as forum to foster publication
  - Offer standards for new communities to join

By software curation & standards

Sharing best practices

Enable sustainability by encouraging open source software

Foster co-development of software

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Discussion Topics

- What are the priorities for the future activities of OSSR (policy/strategy, onboarding or technical developments)?
- Are there additional activities that you want to lead or want to see followed in the OSSR context (e.g. software optimisation)?
- In which projects or activities related to the work of OSSR are you involved and how could those be harmonised? How could OSSR activities profit from those?
- What are the incentives for your members to join OSSR and onboard software, how could those be strengthened?

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OSSR Additional Topics

- Innovative Approaches
- Best practices
- Software quality
- Training
- Software Efficiency
- Organisation

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