

Common
Infrastructures



Nationale
Forschungsdaten
Infrastruktur

Research Software Engineering within the NFDI (INFRA-WG-RSE)

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Focal Points



Infrastructure

Infrastructure

- (Research) Software represents an **essential component** in digital infrastructures.
- Development of a networked infrastructure as envisaged in the Research Data Commons (RDC) concept requires **jointly developed solutions** and agreements for their implementation.
- Functionality, connectivity, compatibility and security of the infrastructure as a whole and of the individual software components depend on **jointly agreed interfaces, standards and conventions**.

Focal Points

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Research Software

- Working with **research data** and its usefulness go **hand in hand** with the use of **research software**.
- In addition to the research data, the software required for its use must thus be equally **available**.
- With its range of variation and abundance, the **provision** of research software and its **findability** has become a challenge.
- To do so, the **FAIR4RS** principles have to applied.

Focal Points



Infrastructure

Research Software

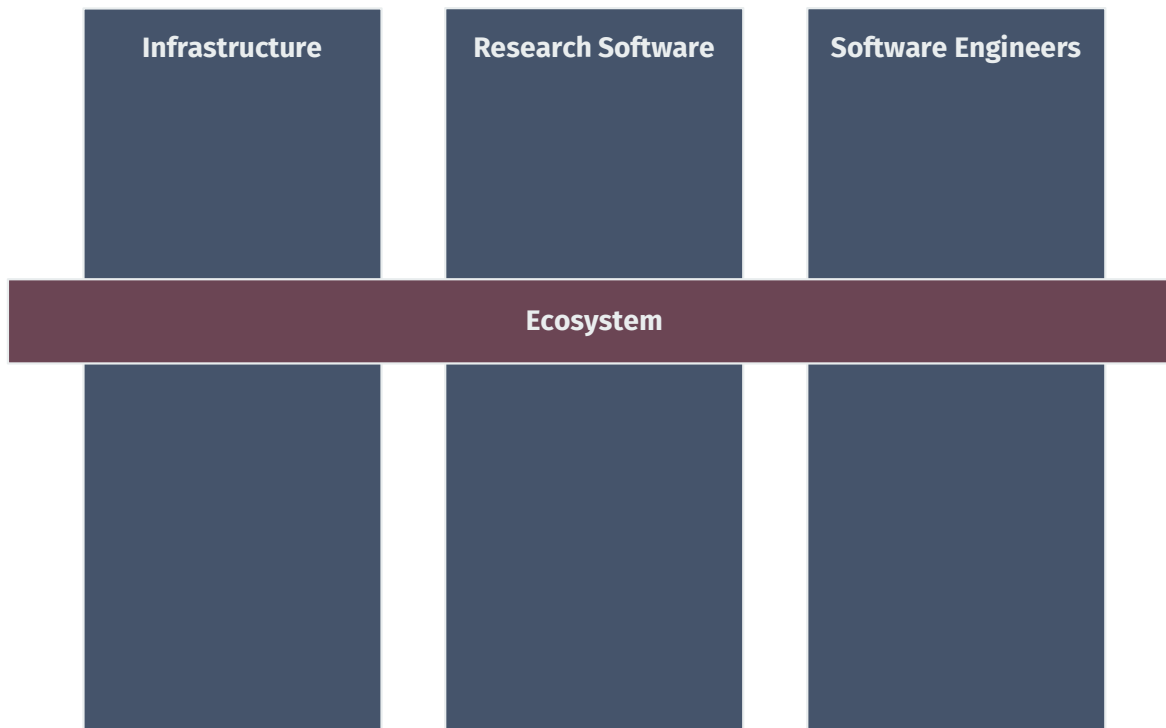
Software Engineers

Research Software Engineers (RSEs)

- Infrastructures are facilities, services, and installations needed for the functioning of communities. Facilities and installations can be an **array of equipment** set up for use.
- But facilities are also abilities and aptitudes to **perform activities** and to serve particular functions.
- Research Software Engineers offer abilities set up as work and duties done for others with the required services, assistance and help to **build and sustain the NFDI and research software**.

Objectives

1/6

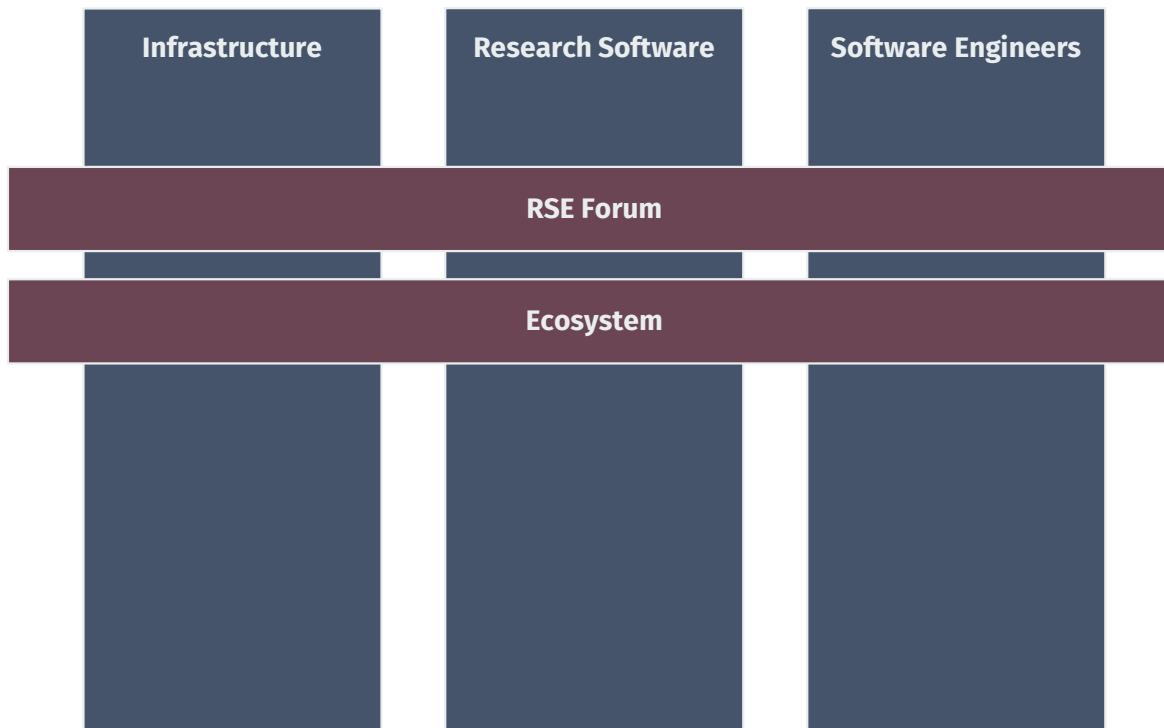


Ecosystem

- For (research) software engineering while implementing the **NFDI**, similar to the structures of large, distributed, free and open source software communities that have been functioning for decades.
- For **communities** forming around research software with those having a demand for software, and those meeting these needs.

Objectives

2/6

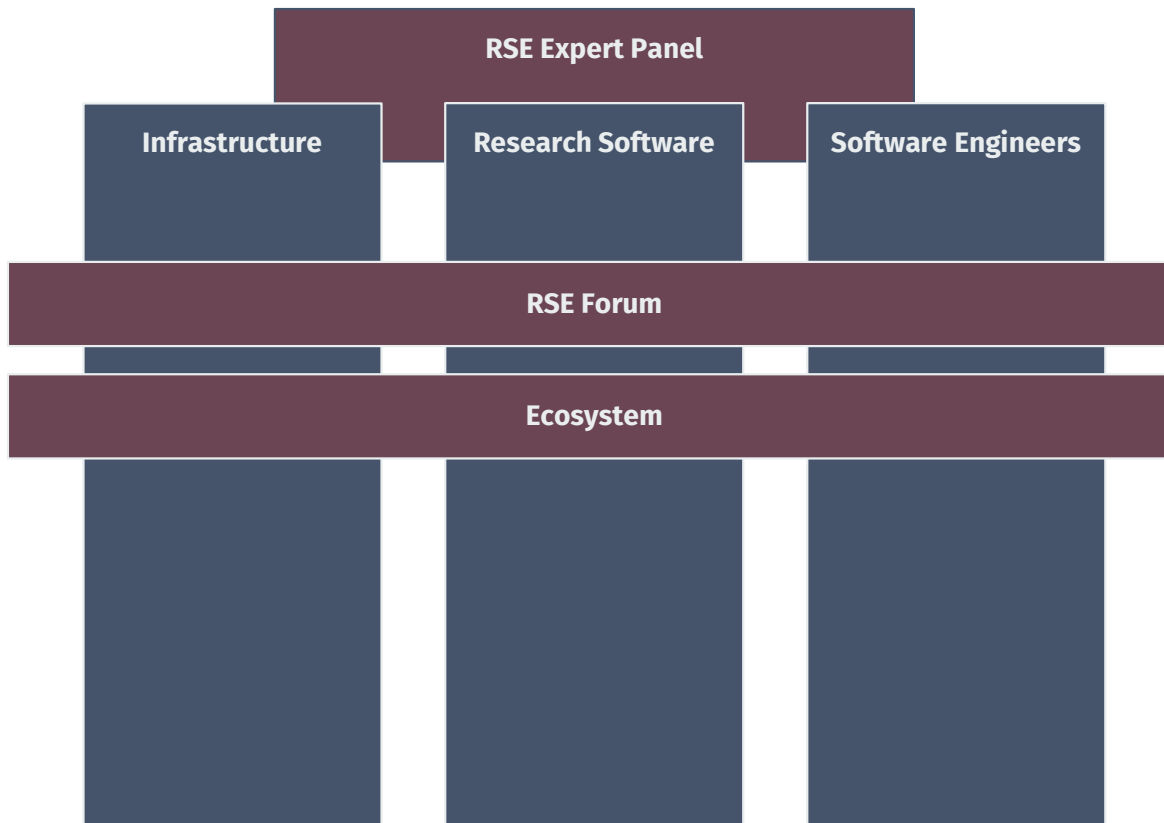


RSE Forum

- For the necessary **communication, exchange and development** of recommendations as well as identification of alternatives for their implementation.
- For **consensus-building** in order to implement cross-consortium measures on the topic of software jointly and in a coordinated manner.

Objectives

3/6

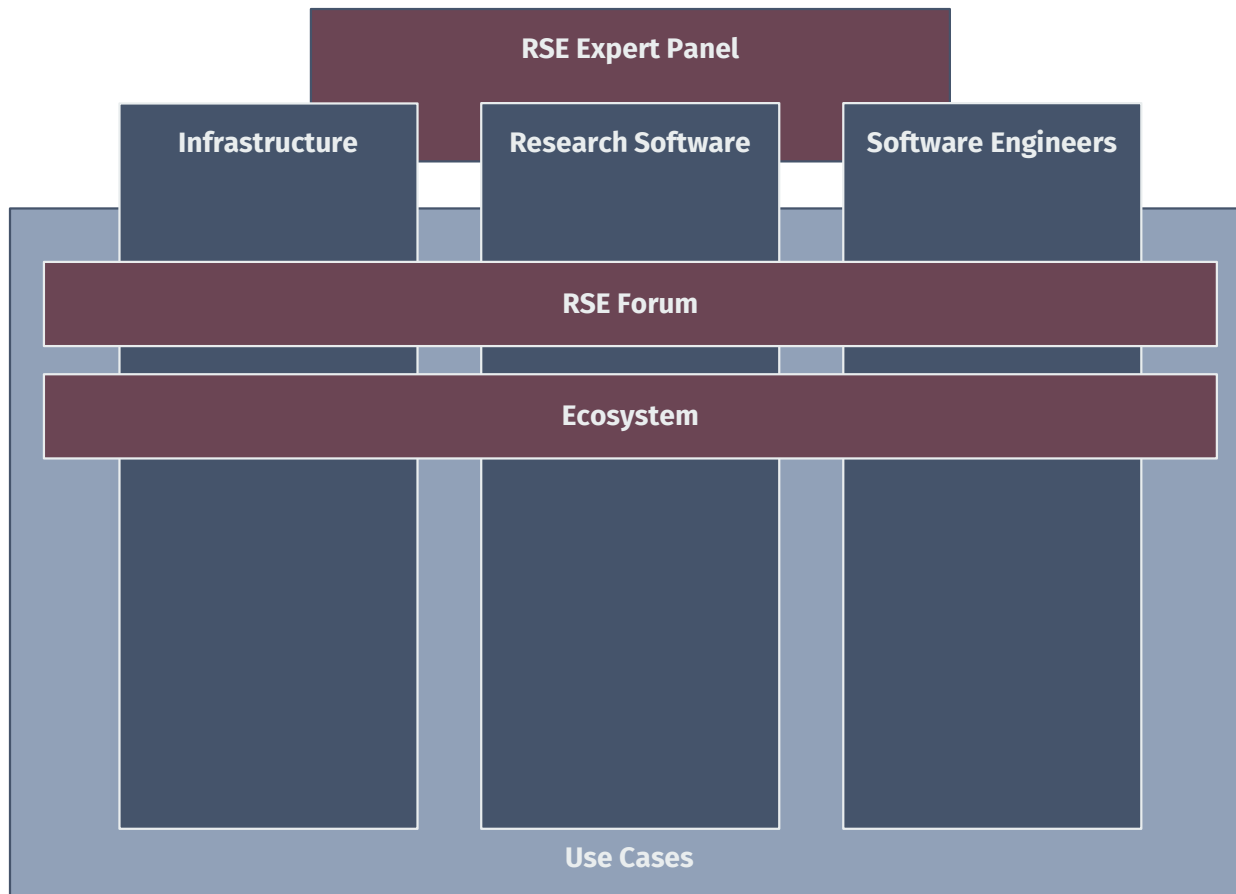


RSE Expert Panel

- For ensuring the development of early **coordinated recommendations**.
- For the preparation of **joint decisions** in committees of the NFDI on software-related topics.
- For serving as **central contact** on the topics of research software and software infrastructure.
- For the receipt and processing of **requests** from committees of the NFDI.

Objectives

4/6

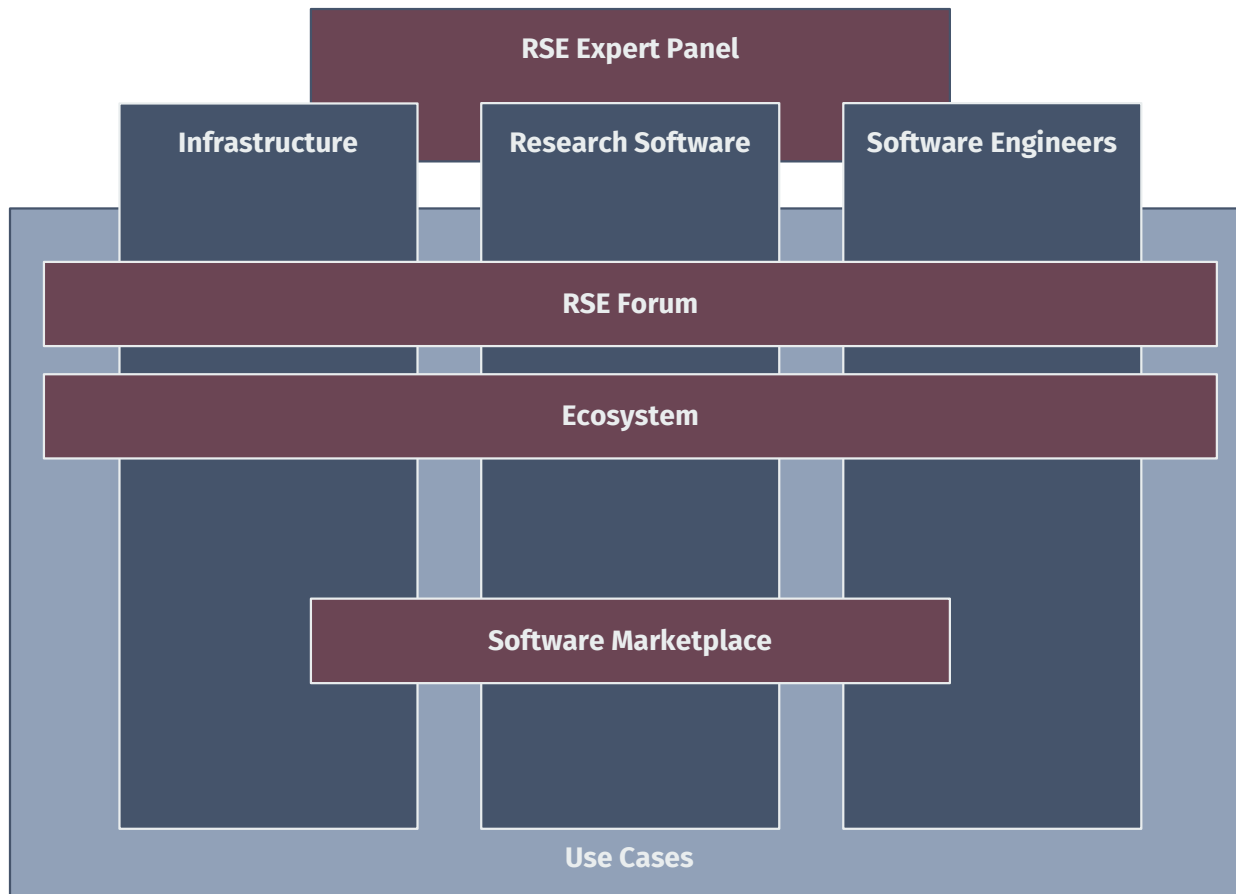


Use Cases

- For **prototypical achievement** of the above objectives and validation of the results.
- For a successive introduction of the acquired **measures** together with the experience gained across consortia.

Objectives

5/6

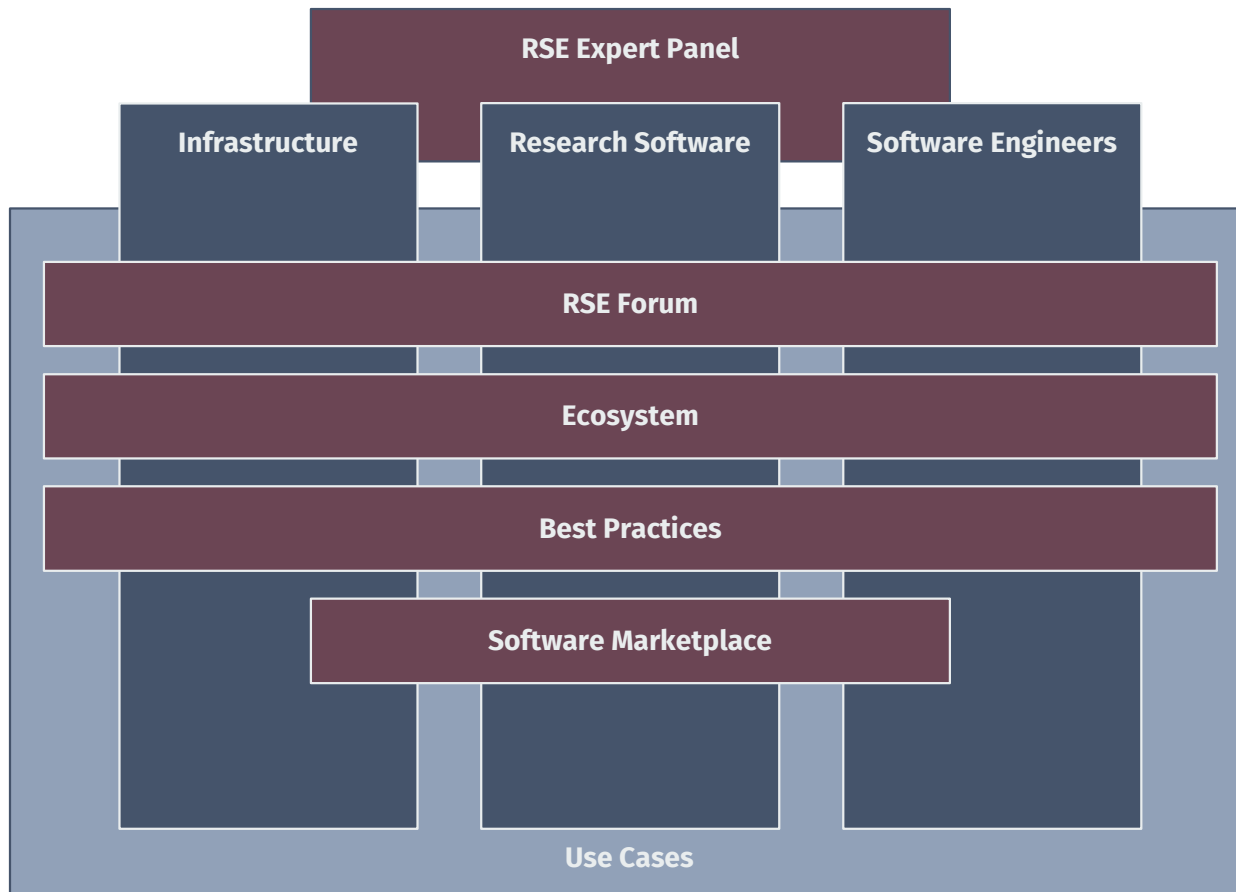


Marketplace

- For **accessing** the extensive portfolio of research software implicitly brought together in the NFDI, with the necessary **metadata** to enable work with the research data made available in the NFDI.

Objectives

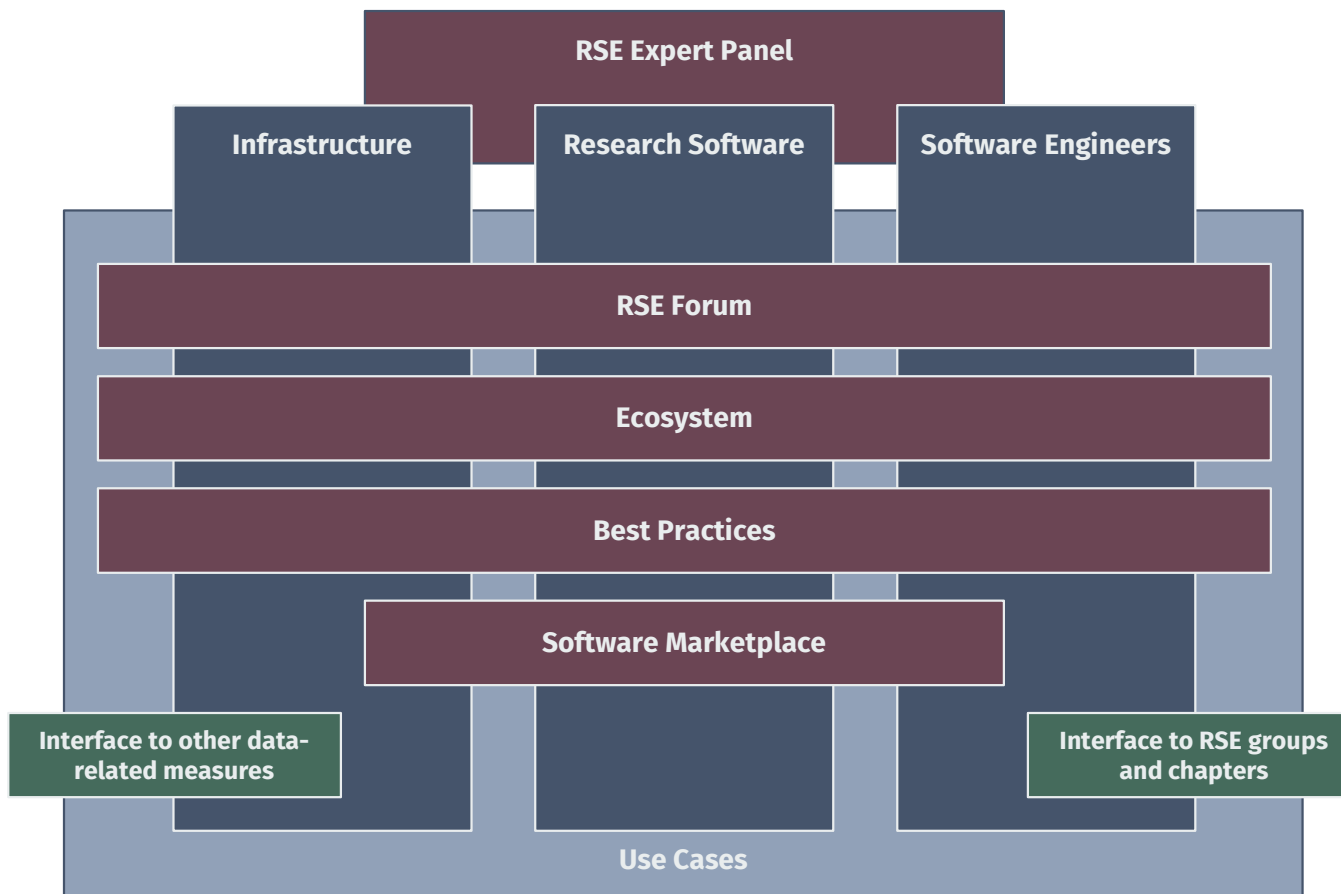
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Best Practices and Training

- For the **support** of consortia and the **communication** of best practices in Research Software Engineering.

Collaboration



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Interfaces

- For ensuring **connectivity and compatibility** with European and international efforts.
- For **dovetailing activities** of complementary initiatives outside with those of the NFDI.
- For **exchange of information** with other sections and working groups thus enabling synergies within the NFDI.

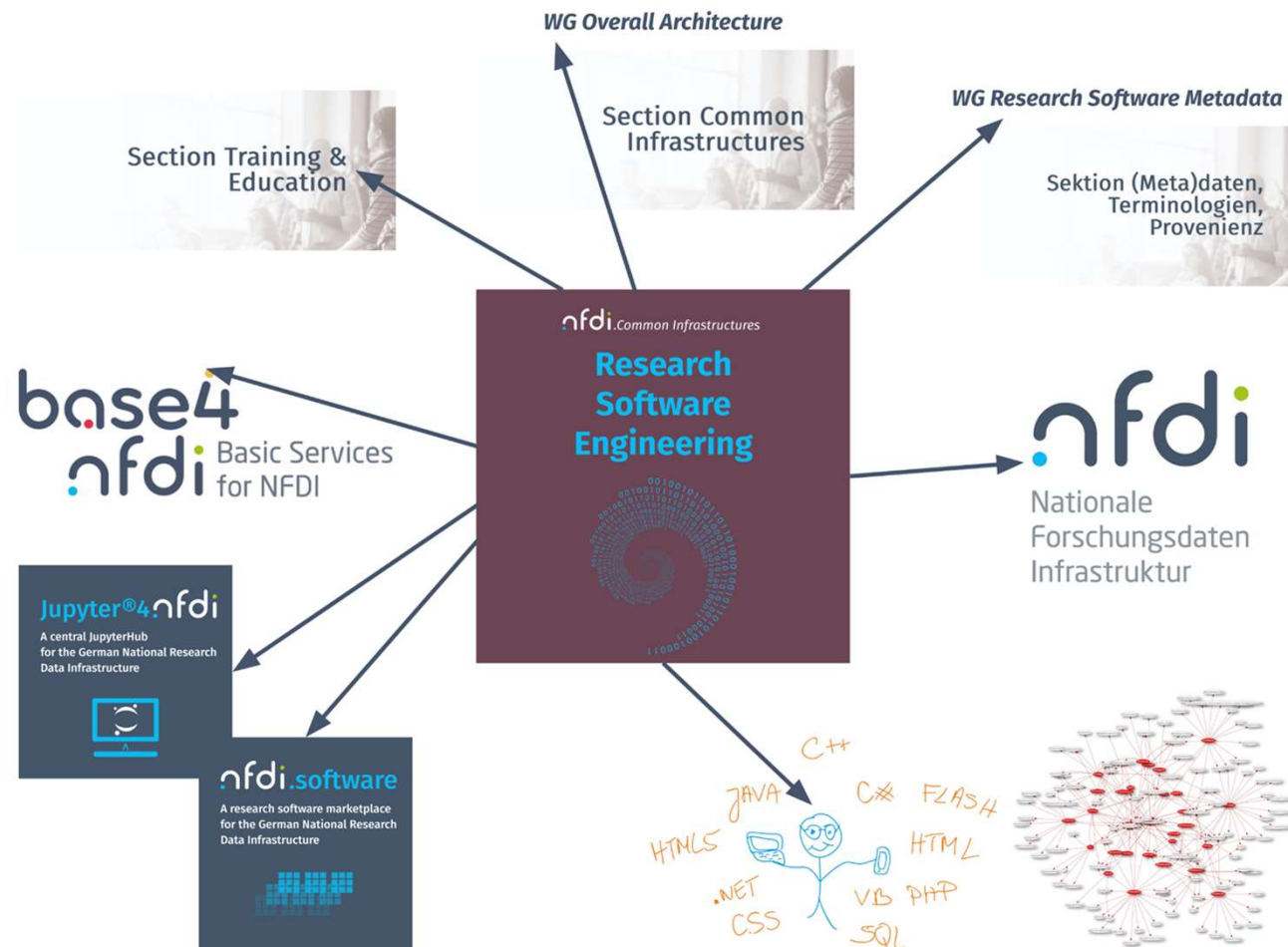
Identified Tasks at the WG RSE start in 2022

- INFRA-RSE-T01: Jupyter
- INFRA-RSE-T02: Training Materials
- INFRA-RSE-T03: Software Marketplace
- INFRA-RSE-T04: Mission Statement "Software Engineering in the NFDI"
- INFRA-RSE-T05: Status Quo Survey and Report
- INFRA-RSE-T06: Monitoring of other overarching initiatives (EOSC, GAIA-X, ...)
- INFRA-RSE-T07: NFDI Software Ecosystem
- INFRA-RSE-T08: Identification of Use Cases
- INFRA-RSE-T09: Quality Criteria for Research Software
- INFRA-RSE-T10: Criteria for NFDI Software Components

Active Tasks in 2022-24

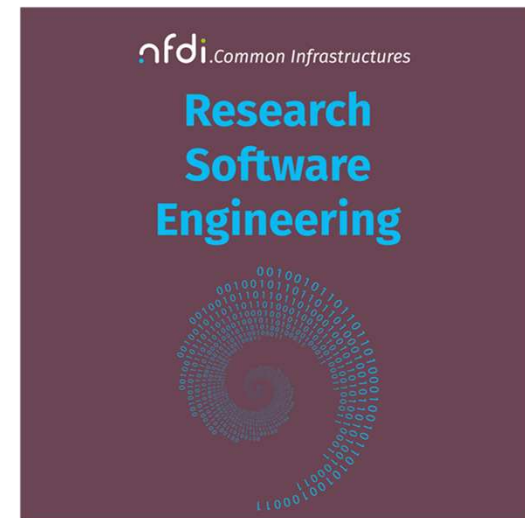
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Connections of the WG RSE to other NFDI entities



How to Join?

- Work on tasks in small subgroups of 1-4 persons
- Report and reflect at monthly meetings of the WG
- Sign up for the mailing list by sending a “Subscribe” to section-infra-wg-rse-join@lists.nfdi.de
- Join the monthly meetings
 - currently on each month's last Monday at 13:00 CET





Finis! Thx :-)

Questions?

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