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## Communication Challenges in RSEs' daily work

*Wednesday 26 February 2025 16:00 (45 minutes)*

In the natESM sprint process, RSEs work closely with scientists to tackle technical challenges within a collaborative research environment, presenting unique interpersonal and communication challenges. In this meetup we want to highlight and discuss some hurdles we as natESM RSEs encounter, including bridging gaps in technical knowledge, adapting to diverse communication styles, and balancing technical priorities with scientific goals. Key challenges also involve managing differing expectations for the project outcomes and promoting essential software practices, such as documentation and maintainability, often within tight timelines.

We want to invite fellow RSEs to discuss communication challenges and listen to experiences encountered in their daily work. In our work, we identified some of the following communication hurdles. Firstly, RSEs and scientists have different styles for communicating technical details and expectations. Secondly, different levels of technical knowledge between scientists and RSEs lead to the challenge of bridging gaps in technical understanding, as not all scientists are familiar with the intricacies of software development or coding. But since some scientists are already very familiar with programming topics and their code, they may know more on the topic than the RSE, especially at the beginning of the project.

While RSEs focus on the sustainability, reusability, and maintainability of software, scientists often prioritize research outcomes. Therefore, when we face conflicting priorities in the project goals, we would discuss and realign the goals with scientists.

With each project, we are working with different scientists who have diverse personalities—from highly collaborative and communicative to more reserved or independent workers. As a consequence we have to adapt to the individual personalities of scientists. Finally, scientists might have high expectations regarding the speed and outcomes of technical developments during the project, while RSEs are aware of the limitations and complexities of the implementation.

Over the last 2 years, we have had some on-the-job learnings which could serve as good practices for effective communication during a collaborative project. Defining precise objectives and a detailed action plan at the onset, enables mutual understanding of the project expectations and responsibilities. This clarity is encouraged through initial Kick-Off meetings, designed to establish these benchmarks at the project's inception. Regular project updates help keep all participants informed about the project's progress and foster a proactive communication environment.

During our meetup session we plan to start with an input talk and then proceed with a discussion following some guiding questions. We aim to discuss with fellow RSEs, exchanging strategies and insights on how to effectively communicate with scientists and strengthen RSE-scientist collaborations across multidisciplinary projects. The outcome of this meetup should be a document with experiences and how we can handle problems, but also reiterate already well established communication practices.

### I want to participate in the youngRSE prize

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