

Call 6: Research project(s) for the imaging data platform

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Context of the call

The NUM currently operates a number of research (data) infrastructures with different purposes. Within the radiological cooperative network (RACOON), a nationwide imaging data platform for the structured real-time collection, evaluation and provision of radiological data from COVID-19 cases was established in the first and second NUM funding phases. This medical imaging platform of all 36 AMC radiology departments supports the creation of highly structured multi-centre imaging datasets. The platform enables clinical and clinical-epidemiological studies and the creation and use of innovative artificial intelligence (AI) applications on shared medical image data. In the field of prospective clinical studies, RACOON closely collaborates with NUKLEUS.

The NUM research (data) infrastructures need to be continually challenged, improved and expanded upon in order to best serve the needs of clinical researchers. To this end, scientific use cases in the form of research projects need to continually be implemented on the platform.

When developing project ideas, the suitability criteria for NUM projects in the document **guiding criteria (annex 1)** should be used for guidance. These criteria are meant to help identify projects that are particularly well suited to be implemented within the NUM framework.

Further development of the RACOON infrastructure is out of scope of this call. This is part of another NUM call.

Objectives of the call

This call serves the purpose to identify at least one research project (use case) that uses the imaging data platform and ideally contributes to improving it further. However, the NUM strives for utilizing the platform in the broadest possible sense and including as many researchers as possible from diverse (ideally interdisciplinary) backgrounds. Therefore, as many collaborative research projects as possible should be implemented with the available funding as part of this proposal.

The research project(s) should pursue the following objectives:

1. Use of the specific functionalities of the imaging data platform to answer a potentially practice-changing scientific question and/or develop AI-based tools with potential impact for patient treatment

2. Make more data available on the platform, thereby expanding the database
3. Utilization of the full range of functionalities offered by the platform, thereby helping to test and – if necessary – further improve it; this includes interfaces of the imaging platform with other NUM platforms like the clinical study platform NUKLEUS
4. Stimulate access of as interdisciplinary a research community as possible to the platform

Specific requirements for the proposal

The proposal needs to lay out one or more specific research project(s) to be implemented on the imaging platform RACOON and – if applicable – other NUM infrastructures like the clinical study platform NUKLEUS.

The respective research questions need to be based on evidence-based planning (i.e. with regard to the relevance of the research question).

The proposal needs to lay out the criteria that were used for selecting the chosen research project(s) that has/have taken precedence over other research project ideas that were also discussed in the process. Such criteria could be the degree of evidence-based planning, clinical relevance, scientific relevance or community support. Also, it should be specifically laid out why the chosen research project(s) are particularly well suited to contribute to the above-mentioned objectives.

If according to the criteria mentioned in the previous paragraph research projects are equally suitable, research projects with interdisciplinary leadership should be prioritized.

In order to support performance-based funding and incentivize patient recruitment and data capture, funding via case fees should be planned wherever possible (e.g. per data record/generation of image file).

If the proposal contains more than one research project, an overarching governance is not necessary. Instead, each research project needs to have its own steering committee. The steering committee needs to link with the governance of the imaging data platform and all affected other NUM infrastructures for close alignment of all activities.

If the proposal contains more than one research project, overlap in the leadership of these research projects should be avoided in order to provide as much opportunity as possible for different research groups to participate.

If PIs with leadership roles in infrastructure platforms that are relevant to this call (i.e. RACOON) are pitching for research projects under this call, conflicts of interest need to be ruled out. In particular, support by the respective infrastructure platform for conducting the research project may not be made dependent on said PIs being included in the proposal. Inclusion in the proposal should be solely dependent on the scientific contribution of the individual PI to the specific research project.

The overall proposal should encompass clearly distinctive work packages and show their interdependencies.

Duration

The overall proposal should be planned from July 1st, 2025 until the end of 2027.

Budget framework

The following indicative budget, including a 20 percent flat-rate project allowance, is envisaged:

2025: 1.000.000 €

2026: 2.000.000 €

2027: 2.000.000 €

Depending on the total volume requested in the proposal, deviations upwards or downwards are possible during the approval process. The basis for the decision is the result of the external evaluation and the available budget in the overall context of all NUM funding measures.

General requirements for content of the proposal

As long as this does not contradict the specific requirements above, the content of the proposal must fulfil the following general requirements that are applicable for all NUM projects:

- Only multi-site, collaborative projects involving and/or benefiting as many NUM partner sites as possible can be funded.
- Clearly defined objectives/outcomes and added value, including a definition of indicators against which these can be tested.
- Builds on or complements existing NUM infrastructures as far as possible - avoids creating parallel structures.
- Clearly defined interface of the governance/steering of the project with the governance/steering of the pre-existing NUM infrastructures that are addressed within the project(s)
- Reflection on the current evidence situation and the international context, in

- particular international best practice.
- When collecting data, international standards should be used and the data needs to be made accessible within the network.

Formal requirements for the proposal

- Per research project: Two spokespersons with two substitutes from different AMCs, with gender parity
- Submission of the proposal in English
- Use of the templates provided by the NUM
- Structured into clearly defined, preferably non-overlapping work packages, for each of which a sub-budget is specified. A distinction should be made between cross-sectional work packages (e.g. central project management) and topic-specific work packages. Topic-specific work packages should be tailored in such a way that they have as little dependency on each other as possible and can therefore stand on their own. Interdependencies between work packages should be described in the proposal.