



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

The Senate of the Faculty of natural sciences and mathematics of the University of Maribor held a regular session on 28. 6. 2022, during which the resolution No. 46, regarding the Policy of open access to the research infrastructure of FNM UM, was approved.

Politics of open access to research infrastructure Faculty of natural sciences and mathematics of the University in Maribor

1. Definition

The Research Infrastructure¹ of the Faculty of Natural sciences and Mathematics of the University of Maribor (hereafter RI UM FNM) refers to the whole research equipment, complex digital research systems, databases and research groups that are used or operated for research purposes. RI UM FNM is essential for research and teaching work, but at the same time it is key for achieving excellence in research and broader social development.

RI UM FNM includes fundamental RI (equipment, etc.) and/or RI for knowledge transfer (researchers, collections, etc.). In certain cases, it can also be defined as a virtual infrastructure or a virtual research environment where the service is provided through virtual means.

RI UM FNM, which is publicly accessible, is listed in the document "List of publicly accessible RI UM FNM and conditions for access". Beforementioned List is approved and, if necessary, updated by the Senate of Faculty of natural sciences and mathematics of the University of Maribor.

Faculty of Natural sciences and Mathematics of the University of Maribor (hereafter FNM UM) manages RI UM FNM as a single entity. The head of the entity is the vice-dean for scientific research and international activities of the FNM UM.

2. Users

RI UM FNM is publicly accessible to researchers, research groups or research organizations within the framework of University of Maribor (hereafter UM) research activity (employees, including researchers of various levels, post-doctoral researchers, technicians and doctors of science) and research activity outside UM (external users, i.e., researchers of other research, humanistic and artistic organizations, from economy and other users). As part of research, users participate in designing or creating new knowledge, products, procedures, methods and systems.

If employees of other UM entities or external users wish to use Research Infrastructure (hereafter RI), UM FNM may request proof of adequate knowledge and skills necessary to use the RI. If the external user does not have the required knowledge and skills for professional use of RI, the entity can offer him a comprehensive service, as part of which work on RI is carried out by qualified employees. The entity may also offer and conduct training for new external users. The costs of this type of training must be settled

¹ According to the definition of the European Strategic Forum for Research Infrastructures (ESFRI), research infrastructures (RI) are facilities, resources or services that represent a larger equipment or set of instruments and represent or complement knowledge resources such as collections, archives and databases. In the following we give examples of RI according to ESFRI: large research installations, collections, libraries, databases, biological archives and collections, high-throughput or. broadband communication networks, research vessels, telescopes, satellite and airborne observation capabilities, computing power (HPC) networks, clean rooms, coastal observation stations, synchrotrons and accelerator, etc.

by the external user.

Users must comply with the relevant principles, strategies, directives and other regulatory documents of the UM when participating and using the RI UM FNM.

3. Access

Access means a legitimate and authorized way of participation and use of RI UM FNM or user services. Access can be physical, remote or virtual (allowing access to RI via communication channels or online network resources).

RI UM FNM includes forms of access based on the excellence of the research work and on the basis of the research market orientation. The form of excellence-based access depends on the scientific excellence, originality, quality and technical or ethical feasibility of the work. A form of market-oriented access is possible in the case of an agreement between the user and the RI, for this form of access the payment of an access fees may occur. This form is also possible when there is a need on the market that requires technical or scientific solutions that can be achieved through access to RI. Both methods are approved on the basis of an internal assessment or expert review of the application.

RI UM FNM is responsible for determining the scope of its own RI available to external users, under clear, transparent and fair conditions.

RI UM FNM provides users a certain quantity of access, which is measured in access units. The access units may vary according to different types of RI and may be precisely defined, such as hours of RI usage, gigabytes created and stored while running complex experiments, and more.

4. Costs and fees

Access to the RI can be free or payable, whereby all conditions related to the use of the RI must be transparent and publicly available. In the case of payable access, the user is charged a fee that must be related to the actual use of the RI. Fees for access to different types of RI may vary, but must follow the following principles:

- verifiability;
- traceability of work performed on RI, including maintaining adequate records of access requests (successful and unsuccessful), reasons for denial of access (where relevant), usage data, etc.;
- prohibitions on double financing;
- compliance with all relevant state funding conditions, EU funding conditions and competition legislation.

Fees for market-oriented access are the same as full commercial prices. The cost unit depends on the amount of use of a particular access unit.

5. Education and training

As part of RI UM FNM's open access policy, we encourage collaboration with other institutions and organizations that can benefit from RI UM FNM for their research, education and training.

6. Limits

Access to RI UM FNM may be restricted by national security and defense, privacy and confidentiality, business sensitivity, intellectual property rights and ethical considerations in accordance with relevant laws and regulations.

7. Ethically conduct, research integrity and non-discrimination

The open access policy of RI UM FNM follows the Code of Ethical Conduct of the University of Maribor and the eight principles defined in the European Code of Conduct for Research Integrity of the European Science Foundation (ESF) and the Association of European Academies (ALLEA). The eight principles that researchers must follow include honesty in communication, reliability in conducting a research, objectivity, unbiasedness and independence, openness and accessibility, duty of care, honesty in citing references and credit, and responsibility to future scientists and researchers.

When deciding on the granting of RI UM FNM access to a user, the latter must not be discriminated against based on personal reasons.

8. Ensuring quality

As part of the quality assurance of RI UM FNM's open access, mechanisms will be established for assessing the quality of RI access within individual entities. The mechanisms take into account the general principles defined by the European Commission. These principles are denoted in English by the acronym "RACER" (*Relevant, Accepted, Credible, Easy, Robust*):

- **Relevance** and close connection with the set goals. Mechanisms should not be too ambitious and should measure the right elements.
- **Acceptance** by RI and stakeholders. The role and responsibilities for the indicator should be well defined.
- **Credibility** for non-experts, unambiguity and easy explanation. Indicators should be as simple and robust as possible.
- **Ease** of monitoring, with low cost and little effort.
- **Robustness** in cases of attempted manipulations.

The established mechanisms must include the following parameters:

- user metrics (e.g., user access, user base and relevance to users),
- RI operational metrics (e.g. ensuring access, service, central management, reliability, visibility, size and development of the user community),
- strategic indicators (e.g., publications and other products, cross-disciplinarity, economic impact) and
- financial metrics (e.g., service, resources, costs, yield).

9. Management with research data

The data management policy contains clear instructions on how and where to store the generated data for a reasonable period of time and on how the user must provide this data for reuse. Instructions may vary depending on the type of RI within each entity. Data must follow the principles of FAIR (*Findability, Accessibility, Interoperability and Re-use suitability*). The management of research data is defined in a separate regulatory document.

10. Transparency

The FNM UM Project Office of the Faculty provides information on the Open Access Policy of RI UM FNM,

general information about RI UM FNM and contacts of RI UM FNM entities.