Application review form

Academy Programme 2021

April 2021 call

Panel/Name of reviewer: Application number:
Name of applicant:
Title of proposed project:

An Academy Programme is a research programme funded by the Academy of Finland. It is a thematic, target-oriented and coordinated body of research projects designed to promote the renewal of scientific research and to produce cutting-edge research knowledge in a specific thematic area. A key goal is to generate scientific impact.

Critical Materials in Circular Economy of Cities (Romulus) is aimed at encouraging Finnish researchers to seek bold, new research initiatives that can produce new scientific information in the programme's thematic areas. Applications to the programme are particularly encouraged from projects that combine natural sciences, engineering and social sciences research. Applicants are recommended to take special note of the systemic nature of circular economy in cities. Projects may apply natural science and engineering methods to study both the structures and processes of urban circular economy and critical materials. The programme especially encourages interdisciplinary and cross-disciplinary teams that will be able to examine circular economy in cities both from the point of view of recyclable critical metals, entrepreneurship and organisation and from the point of view of societal institutions (legislation, culture, political decision-making, public governance).

Please provide both written feedback and numerical ratings to each of the following items.

- Blue text with bulleting refers to technical instructions in the online services (SARA).

The numerical evaluation of the sub-items and final rating is made with a rating scale ranging from 6 (outstanding) to 1 (insufficient).

Rating	Description
6 (outstanding)	Demonstrates extremely high novelty and/or innovation; has potential to substantially advance science at global level; presents a high-gain plan that may include risks

5 (excellent)	Is very good in international comparison – contains no significant elements to be improved
4 (good)	Is in general sound but contains some elements that should be improved
3 (fair)	Is in general sound but contains important elements that should be improved
2 (poor)	Contains flaws; is in need of substantial modification or improvement
1 (insufficient)	Contains severe flaws that are intrinsic to the proposed project or the application

1 Project's relevance to programme

1.1 Project's relevance to programme   Sub-rating (1–6)
Contribution of the application to achieving the objectives of the programme

- See all items of the research plan and special item **1.4 Special objective of call** in the research plan.

2 Quality of research described in plan

2.1 Scientific quality, novelty and innovativeness of research   Sub-rating (1–6)

Significance of project; objectives and hypotheses; ambitiousness and state of the art of objectives (possible novel concepts and approaches or development across disciplines); scientific impact of research; potential for breakthroughs or exceptionally significant outcomes; etc.

- See item **1 Aim and objectives** in the research plan.

2.2 Implementation of research plan   Sub-rating (1–6)

Feasibility of project (bearing in mind extent to which the proposed research may include high risks); materials, research data and methods; human resources and management of research tasks; research environment including research infrastructures; identified potential scientific or methodological problem areas and mitigation plan; etc.

- See item **2 Implementation** in the research plan.

2.3 If applicable: Research consortium (no numerical rating)

Significance and added value of consortium for attainment of research objectives

- See item **2.4 Added value of consortium** in the research plan.
- A consortium is a fixed-term body of subprojects and a collaboration of research projects under a joint research plan that is implemented in systematic collaboration. A consortium application is reviewed as a single research plan.

3 Competence of applicant(s), quality of research collaboration

3.1 Competence of applicant(s) and complementary expertise of applicant's research team (project personnel) Sub-rating (1–6)

Merits and scientific expertise of applicant (in case of consortium: applicants) in terms of project implementation; complementary expertise of applicant's research team (i.e. project personnel directly working/funded in the project); competence of applicant(s) in terms of supervising PhD candidates or postdoctoral researchers; support for researcher training within project; etc.

- See item **3.1 Project personnel and their relevant merits** in the research plan.
- See **most relevant publications and other key outputs.**
  - See also **CV(s)** of the applicant(s) in the application form.
  - See also complete **list(s) of publications.**
- If you are reviewing consortium applications, competence of all principal investigators should be reviewed.

3.2 Significance of research collaboration and researcher mobility Sub-rating (1–6)

Significance of national and/or international research collaboration (i.e. collaborators engaged in the project with their own funding) including complementary expertise and research environment of collaborators in terms of project implementation; significance of planned mobility for implementation of research plan and researcher training; etc.

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- See item **3.2 Collaborators and their key merits in terms of the project** in the research plan.
  - See attached **Letter(s) of commitment.**
- See **Mobility** in the application form.
  - See attached **Invitation letter(s) for research visit(s).**

4 Responsible science

4.1 Responsible science   **(no numerical rating)**

Has the applicant considered the following aspects of responsible science properly in the application?

- See item **4 Responsible science** in the research plan.
- The Academy of Finland is committed to promoting research integrity, responsible conduct of research and the principles and practice of equality and nondiscrimination and open science. See 'Instructions for reviewing' for further information.

4.1.1 Research ethics

☐ Yes

☐ No

4.1.2 Promotion of equality and nondiscrimination within the project or in society at large

☐ Yes

☐ No

4.1.3 Open access of research publications

☐ Yes

☐ No

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4.1.4 Data management and open access to data

☐ Yes

☐ No

4.1.5 Provide further comments if responsible science aspects have not been properly considered

- In addition, you are encouraged to comment on the societal effects and impact, including principles of sustainable development (see items 4.4 and 5 in the research plan). However, these should not affect the scientific review/rating or ranking of the application. Instead, they will be considered as an additional factor when the funding decisions are made.

5 Overall assessment and rating

5.1 Main strengths and weaknesses of project, additional comments and suggestions (no numerical rating)

Please list major strengths and weaknesses of the application as well as any additional comments.

- Please give an overall assessment for the application including lists of strengths and weaknesses as well as any additional comments. It is important to comment on both the strengths and the weaknesses of the application.

Strengths:

Weaknesses:

Comments:

6 Overall rating   Rating (1–6)

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- Please note that the final rating should not be a mathematical average of the sub-ratings. For example, the application should not be penalised if it has a slight weakness in one evaluation item that is later strengthened in another item (e.g. lack of some expertise in a local team but compensated through international collaboration).

Ranking based on the panel discussion (the ranking is made during the panel meeting)

Your application was ranked [ordinal number] of all [number] Critical Materials in Circular Economy of Cities (Romulus) applications reviewed in this panel. Only applications with the final rating of 5 or 6 were ranked. All applications addressed to this call were evaluated in the same panel.