Tips for Writing a Successful CNMS User Proposal

A practical guide for prospective users

A strong CNMS proposal presents an important research question, a credible plan to address it, and a clear reason why CNMS capabilities and expertise are needed. The guidance below is aligned with the proposal evaluation criteria and is intended to help applicants make their case clearly and efficiently.

Pre-Submission Planning

Contact CNMS Staff Early Reach out to specific CNMS scientific staff or area leads before writing your proposal. Discuss project feasibility, scope, timelines, and the capabilities needed to achieve your research objectives.

Select the Right Proposal Type Choose the format that best fits your project: General User Proposal (12-month access with a potential 12-month renewal); Rapid Access (off-cycle, for limited-resource or proof-of-concept studies); Partner User; or a Programmatic/Proprietary track. Confirm current eligibility and submission requirements before applying.

1. Establish scientific or technological significance | 25%

State the central problem and why it matters. Explain the knowledge gap or technical barrier, what is new about the proposed work, and what a successful result would advance. Make the significance understandable to a knowledgeable reviewer who may not work in your exact specialty.

> **Make it stronger** Lead with a specific research question and explain the potential advance—not only the general importance of the field.

2. Present a clear, feasible technical approach | 10%

Connect each research objective to a method, measurement, calculation, or fabrication step. Explain what you will do, what data or outcomes you expect, and how those results will answer the research question.

> **Make it stronger** Use a concise objective → approach → expected outcome structure. Identify major technical risks and reasonable alternatives when relevant.

3. Show that work outside CNMS is adequately supported | 10%

Describe the complementary work needed for the project to succeed, including sample preparation, preliminary characterization, analysis, or other research performed at your home institution or elsewhere. Clarify what is already available and what remains to be done.

> **Make it stronger** Distinguish the tasks your team will perform from those requested at CNMS, and explain how the pieces fit together.

4. Define the CNMS work and its expected outcomes | 15%

Specify the CNMS research tasks and explain how each supports the overall objectives. Describe the intended samples, conditions, measurements, or outputs at a level appropriate for assessing feasibility.

> **Make it stronger** Avoid a generic list of instruments. Show what each requested capability will contribute to a specific decision or result.

5. Explain why specialized CNMS capabilities are essential | 15%

Make a compelling case for the unique or specialized capabilities, facilities, and/or staff expertise needed at CNMS. Explain why those resources are important to the proposed science and what they enable that would otherwise be difficult to accomplish.

> **Make it stronger** Name the relevant capability or expertise and link it directly to the scientific question and anticipated outcome.

6. Request an appropriate amount of time and resources | 10%

Provide a realistic estimate of CNMS work, including samples, measurements, instrument time, and other resources. State whether team members plan to be on site to assist with experiments, and account for their participation in the proposed schedule.

> **Make it stronger** Explain the basis of your estimate; an appropriately scoped, justified request is stronger than an unsupported large request.

7. Demonstrate the team's ability to deliver impactful results | 15%

Describe the experience and complementary expertise that position the team to execute the work and produce important publications or other significant outcomes. Indicate whether team members will participate on site in experiments and explain their anticipated roles, as applicable.

> **Make it stronger** Make the connection between team qualifications, the proposed plan, and the likely research outputs explicit.

Practical writing tips

- **Be specific.** Replace broad promises with testable questions, defined tasks, and measurable outcomes.
- **Write for reviewers.** Define specialized terms and make the logic of the project easy to follow.
- **Keep the scope coherent.** Prioritize a focused, achievable plan over a long list of loosely connected experiments.
- **Show integration.** Explain how CNMS work connects to preparation, complementary measurements, analysis, and dissemination.
- **Check consistency.** Make sure objectives, methods, requested resources, and expected outcomes tell the same story.

Before you submit

- Is the scientific or technological problem and its importance immediately clear?
- Are the proposed methods, CNMS tasks, and expected outcomes linked?
- Have you explained the need for specialized CNMS resources or expertise?
- Are work outside CNMS, requested CNMS resources, and any planned on-site participation realistic and justified?
- Does the proposal demonstrate the team's readiness and potential for impactful results?

Additional consideration

The evaluation form also includes a separate question for proposals designated as PARTNER, asking whether the project is likely to enhance CNMS capabilities and/or operations and deliver significant value to future CNMS users. Applicants in this category should explain that potential broader benefit when applicable.

About this guide

This document provides proposal-writing advice based on the CNMS User Proposal Evaluation criteria. It is not a substitute for current proposal call instructions, eligibility requirements, or submission guidance. Review the current CNMS user program materials before applying.