Science and Engineering
Research Council

A ✳ S T A R

FREQUENTLY
ASKED QUESTIONS

Q: What are the key criteria SERC uses to select research proposals for funding?

A: In order of descending priority:

1. Intellectual / Innovative Merit
- To what extent does the proposal suggest and explore creative and original concepts?
- Does the proposal employ novel approaches or methods?
- Are the aims original and innovative?

2. Competitive / Comparative Advantage
- What advantages does the proposed activity have over related international efforts?

3. Likelihood of Success
- To what extent is the plan for organising and managing the project credible and well conceived?
- Did the applicant acknowledge potential problem areas and consider alternatives?
- Is the schedule and budget realistic?

Q: What areas of research are appropriate for a PSF proposal?

A: The PSF call considers proposals in
- the areas of interest of SERC's RIs – see the links below to the individual RIs for a description of these areas:
  Institute of Microelectronics (http://www.ime.a-star.edu.sg)
  Data Storage Institute (http://www.dsi.a-star.edu.sg)
  Institute for Infocomm Research (http://www.i2r.a-star.edu.sg)
  Institute of Chemical and Engineering Sciences (http://www.ices.a-star.edu.sg)
  Institute of Materials Research and Engineering (http://www.imre.a-star.edu.sg)
  Singapore Institute of Manufacturing Technology (http://www.simtech.a-star.edu.sg)
  Institute of High Performance Computing (http://www.ihpc.a-star.edu.sg)
  AND
- research areas that are complementary to the areas of interest of SERC's RIs – e.g., while none of the RIs focus on statistical analysis, this area is complementary to the work of many of the RIs.

  Notes:
  1. The RI areas of interest referred to above should be interpreted very broadly.
  2. The PSF call is **not** looking for research proposals in areas where it currently has existing focused internal projects.

Some examples of SERC areas of interest are:

- A: Applied math
- Chemistry
- Cognitive science and intelligent systems
- Communications
- Computer engineering
- Computer science
- Condensed matter physics
- Data analytics
- Electrical engineering

- Electronic/magnetic/optical devices and systems
- Fluids
- Manufacturing
- Mathematics
- Materials science
- Mechanics
- Optics
- Probability/statistics

Note: this list is more illustrative than exhaustive. Please do not hesitate to propose in other areas that satisfy the criteria for all proposals.

Q: Why is the emphasis of the Public Sector Research Funding (PSF) grant call shifting towards upstream research?

A: A*STAR, as an agency of the Ministry of Trade and Industry, has a mission to impact Singapore's economy through technical interactions with industry. The research institutes (RIs) of A*STAR's Science and Engineering Research Council have research objectives aligned with this mission. The RIs require a constant input of novel ideas for future research in order to prepare for the industry requirements of the future. SERC turns to Singapore's Institutes of Higher Learning to provide strong input for this. The shift of the PSF grant call towards upstream research is to strengthen this pipeline from academia towards the RIs to meet this goal.

Q: What is meant by "upstream research"?

A: Research with a horizon for industry application exceeding 5 years or is, by nature, targeted at developing novel capabilities where specific applications are not yet envisioned.

Q: Does PSF support research in the life sciences?

A: No. These areas are not of high priority for the PSF funding and the annual grant calls from H&L cluster in BMRC would be a more appropriate platform for these proposals.

Q: Why are PSF proposals placed in two categories?

A: The division of PSF proposals into two categories (A: less than or equal to S$400K, B: greater than S$400K) resulted from discussions with faculty members from the Institutes of Higher Learning in early April. Many faculty members felt that with a limited total budget for the PSF call, it was more important to support many projects than a small number of large ones. Yet, there was a realization that certain areas (primarily experimental work) required larger budgets to succeed. Further, questions were raised about whether it was appropriate to have projects with budgets much larger than those with small budgets compete directly on pure merit – given the disparity in the size of the effort.

In response to this input, PSF proposals will be split into two categories. Proposals in each category will be prioritized relative to those within the same category. There is no fixed portion of the total PSF budget to be allocated to each category; rather, the percentage of the PSF budget devoted to each will be determined by the quantity and quality of the proposals in each category. Division into two categories is expected to result in a greater number of proposals receiving funding.

Q: How do I qualify for the two-year extension of the PSF grant?

A: The option of two years of additional funding is provided to encourage PSF grant recipients to work with the SERC RIs. 30 months into the original three-year grant, grantees will be given an opportunity to apply for the two years of additional funding. To qualify, the grantee must win the support of one or more of the RIs' Executive Directors (EDs). The EDs will likely approve this extension provided that they see direct applicability for their RIs and/or meaningful collaborations with their RI's research staff develop. With the EDs' support, the final grant will be approved through an internal SERC process. This 3+2 scheme applies only to the PSF 2012 Grant Call and beyond.

Note: the original 3-year grant does not have any requirement of or preference for collaborations with the SERC RIs.

Q: Does the PSF grant allow for visiting professors?

A: The travel and subsistence of visiting researchers is permitted within the PSF framework, provided that they are identified in the original proposal (and budget) and approved in the award. However, the PSF grant does not provide salary support for researchers visiting from overseas. Visiting professors are typically faculty members with good standing in the field who can contribute materially to the progress of the project. Post-docs and non-research staff are generally not categorized as visiting professors.

Q: What should I do if there is a change of PI in the midst of proposal evaluation?

A: Because the background of the PI is also important to SERC's consideration, the reason for the change (resignation of PI from IHL etc) must be communicated to SERC immediately. SERC may consider withdrawing the proposal or terminating the project (if the proposal has been selected).