

Science and Technology Facilities Council

STFC Follow on Fund (FoF) Guidance Notes

Contents
INTRODUCTION2
Follow on fund2
ELIGIBILITY
COVID-19
TIMETABLE
EQUIPMENT
APPLICATION PROCESS
Case for Support5
Letters of Support5
Data Management Plan6
Data Protection6
Ethical considerations
ASSESSMENT7
Panel assessment7
Confidentiality and Peer Review7
Criteria for Assessment7
Response to reviewers
RESUBMISSION
SUCCESSFUL APPLICATIONS9
RESEARCHFISH9
CONTACTS9
USEFUL LINKS9
ANNEX 1: CERN, ESO OR ESRF SCIENTISTS AND ENGINEERS
ANNEX 2: SOFTWARE DEVELOPMENT PLAN GUIDELINES

INTRODUCTION

STFC offers a diverse portfolio of knowledge exchange schemes, designed to allow funding of projects from initial development right through to commercialisation. These schemes are designed to facilitate the transfer of STFC funded research into an industrial setting over a number of different stages of commercialisation.

• Innovation Partnership Scheme (IPS)

• To transfer technology and expertise developed through STFC funding to the marketplace in partnership with industry and other academic disciplines

• Follow-on Funding (FoF)

To support proof of concept for a project following on from STFC funded research.
Partner not permitted

A full breakdown on the differences between the schemes is listed below. Please note, that each scheme has a separate application process/guidance details, and applicants are asked to ensure they have selected the right scheme when submitting proposals through Je-S and read the appropriate guidance document.

	IPS	Follow-on-funding
Max duration	36 months	18 months
Max cost*	£450,000	£200,000
STFC contribution	£360,000	£160,000
Industry support	Essential	Not required
IP status	IP established	Plan to consider IP protection
Scope	Technology development/scale-up	Development of a proof-of concept

* Please note the max cost does <u>not</u> include any capital requested. Capital/equipment costs should be listed on top of this.

Follow on fund

Follow on funding (FoF) is intended to provide financial support at **very early or pre-seed** stage of turning research outputs into a commercial application. The idea must have a clear potential for commercialisation. Proposals should not exceed a total value of £200K at 100% of fEC and should be no longer than 18months long. STFC will award 80% fEC.

FoF is a 'proof-of-concept' model, where further work on an idea will make any commercial potential evident to the market and so secure, for example, a spin-out (seed/venture finance) or licensing opportunity or provide the necessary information to bid for other KE schemes e.g. IPS, CLASP. This often takes small amounts of funds to enable activities essential to preparing a robust business plan.

Follow-on funding is designed support a range of relevant activities to enable the development and examination of a concept to establish its commercial feasibility and scientific and technical merit. Industrial partners are not required as part of Follow-on Fund applications, however industrial, non-governmental organisations or academic partners from other higher education institutes are welcome where appropriate. Whilst other funding is not a prerequisite, Follow-on Fund grant applications which have secured funding from elsewhere e.g. host institution, will be looked upon favourably. N.B. Funding from third parties must be additional to the funds requested.

Funding can be used for

- Undertaking further scientific and technical development of an idea.
- Improving an intellectual property (IP) position, through for example, supporting further work to exemplify or broaden patent claims. All intellectual property arising from a Follow-on Fund grant will rest with the institution to which the grant is awarded.
- Gaining further information about the market for the new product or process.
- Identifying potential licensees or opportunities for joint ventures.

Follow-on Funding will not support:

- 'Blue sky' research.
- Associated intellectual property costs e.g. patent costs.

ELIGIBILITY

Proposals for projects must clearly demonstrate that the science, technology and expertise involved originated from the STFC core Science Programme. As such, the lead applicant must have previously or currently hold STFC funding from the core Science Programme (nuclear physics, particle physics & particle astrophysics, astronomy & space science, and accelerators & computing in support of these), and be employed with an eligible Research Organisation (RO).

Please note, if an applicant has received STFC funding and is applying to further that technology, but not in his/her name (for example through a studentship) then they are still eligible to apply for the FoF scheme, provided they are attached to an eligible RO and can show they will remain under contract for the length of the grant. If this is the case, please contact the office with a grant reference number(s) so we can confirm eligibility.

The RO must be eligible to hold UKRI grants, i.e. be an approved UK Higher Education Institution, Research Council Institute or other *Public Sector Research Establishments*, or an Independent Research Organisation. Full details of approved RCIs and IROs can be found on the <u>UKRI website</u>. For further information applicants should refer to the <u>STFC Research Grants Handbook</u>. STFC employees working at one of the national laboratories are <u>not</u> eligible for this scheme and should apply for the internal proof of concept fund.

For further information applicants should refer to the STFC Research Grants Handbook.

COVID-19

UKRI recognises that the COVID-19 pandemic has caused major interruptions and disruptions across our communities and are committed to ensuring that individual applicants and their wider team, including partners and networks, are not penalised for any disruption to their career(s) such as breaks and delays, disruptive working patterns and conditions, the loss of on-going work, and role changes that may have been caused by the pandemic.

Reviewers and panel members will be advised to consider the unequal impacts of the impact that COVID-19 related disruption might have had on the track record and career development of those individuals included in the proposal and will be asked to consider the capability of the applicant and their wider team to deliver the research they are proposing. Where disruptions have occurred applicants can highlight this within their application, if they wish, but there is no requirement to detail the specific circumstances that caused the disruption.

UKRI acknowledges that it is a challenge for applicants to determine the future impacts of COVID-19 while the pandemic continues to evolve. Applications should be based on the information available at the point of submission and, if applicable, the known application specific impacts of COVID-19 should be accounted for. Where known impacts have occurred, these should be highlighted in the application, including the assumptions/information at the point of submission. There is no need to include contingency plans for the potential impacts of COVID-19. Requests for travel both domestically and internationally can be included in accordance to the relevant scheme guidelines, noting the above advice.

Reviewers will receive instructions to assume that changes that arise from the COVID-19 pandemic, post-submission, will be resolved and complications related to COVID-19 should not affect their scores.

Where an application is successful, any changes in circumstances that affect the proposal will be managed as a post-award issue.

TIMETABLE

All the KE schemes have two closing dates a year and are assessed by a panel of experts typically around 10-12 weeks after the closing date. Key dates can be found on the <u>call webpage</u>, and will be circulated to all eligible applicants following submission. Please note the call will close at 4 pm on the specified date.

Applicants should be aware that submitting a proposal in Je-S sends the application to the Universities Research Office, not UKRI. Please allow enough time before the deadline to allow the proposal to process through the Universities internal submitter pool. Please see the call webpage for more details on UKRI/STFC deadlines including the closing date and latest time for receipt of proposals. Proposals submitted after these deadlines will not be accepted.

Applications will be assessed for eligibility and sent for peer review, after which the lead PI will be invited to respond to the comments. Please note, in accordance with UKRI guidelines, applicants have 5 days to respond to these comments, unless otherwise agreed with the STFC office. Proposals will then be sent to the panel for review, and final decisions made.

EQUIPMENT

There is a limited budget for Capital/Equipment in these schemes, and applicants should contact the office to discuss their request before applying. Please see the <u>Capital guidelines</u> in the STFC Grants Handbook for the latest terms and conditions.

APPLICATION PROCESS

All applications should be made *via* the Joint Electronic submission (Je-S) platform. To submit a proposal, applicants should navigate to the following:

- 1. Council: STFC
- 2. Document type: Standard proposal
- 3. Scheme: FoF
- 4. Call/type/mode: KE September 2021

As part of the application process, the following documents should be uploaded through Je-S and labelled accordingly. Any documents not listed, such as CVs, extra results, list of publications etc. will be returned to the lead applicant for removal.

- Je-S pro forma
- Six page case for support (Mandatory)
- One page Gantt chart (Mandatory)
- Data management plan (Mandatory)

- Letter of Support from Technology Transfer Office (Mandatory)
- Letters of Support from organisations interested in the project (Recommended)
- Letter of Support from each Project Partner (If necessary)
- Covering Letter (Optional. Please note, cover letters will <u>not</u> be seen by external reviewers/the panel)
- Other (Optional. Please note, any document uploaded under "other" will <u>not</u> be seen by external reviewers or the panel)

All documents should conform to the guidelines described in the Je-S help text.

Case for Support

The case for support should be no longer than six pages.

It is the responsibility of the principal applicant to ensure that information is worded in such a way as to protect commercial, confidential, or sensitive data. STFC will assume that the applicant has obtained necessary permissions from any party that may be involved in the application. The six-page Case of Support must include information under the following headings. Applications **WILL BE REJECTED** by the office for non-compliance with these directions.

Background and Aim

What is the STFC funded research that will form the basis of this project? What is the aim of this application? Who will benefit from this project and subsequent commercialisation?

• Technical Summary

Provide a detailed account of the current status of the technology you are proposing and the plan for development. The summary should provide sufficient detail for referees to assess fully the technical aspects of the proposed project.

Business Plan

Please describe how you will investigate the development of a business plan, which will include a route to market. Describe the commercial opportunity and the predicted investment and mechanism required post-project to take forward to commercialisation. This should also include a summary of the current IP position (further detailed in the Letter of Support from your TTO).

• Work Plan and Risk Analysis

Detail specific work packages, assigning responsibility between partners if appropriate. Applicants should show that they have identified risks and developed alternative strategies to mitigate these. The applicants should consider both technical, programmatic and, where relevant, commercial risks.

Resources

State the resources requested by the applicants and provide justification for them. The Panel can reduce resource requests if they feel there is insufficient justification. Describe what the added value of STFC funding will be.

• Project Deliverables

Identify what the direct outputs will be at the end of this grant (please be specific).

Letters of Support

Technology Transfer Office (mandatory)

A letter of support from an applicant's Technology Transfer Office (or equivalent) must be included with each FOF application. It should relate specifically to the proposal (i.e. should not be a generic letter of support). The letter should include:

- Support (if any) from the office already provided (such as financial or resource)
- Support that will be provided if the application is successful
- Outline of current and anticipated future IP position (has a patent been filed / granted)

Project partners (optional)

Letters of support must be included from any named partners. These must:

- Be either formal letters of support (on headed paper and signed by a senior member of staff or director), or via e-mail
- Be dated within 6 months of the submission
- Be no more than two sides of A4 in length
- Detail their interest and involvement in the project in terms of specific objectives and desired outcomes together

Supportive organisations (optional)

Letters of support can be included from other relevant parties not directly involved in the project but who support the objectives, for example, potential end users. Letters should:

- Can be either formal letters of support (on headed paper and signed by a senior member of staff or director), or via e-mail
- Be dated within 6 months of submission
- Detail their interest and involvement in the project in terms of specific objectives and desired outcomes together
- Detail the projected market size, customers and sales
- Describe how the company could commercialise the technology beyond the project

For more information, please see details in the research grants handbook

Data Management Plan

It is anticipated that all applications will produce or collect data during the course of the proposed project. The development of a data management plan as an attachment to the Je-S pro forma is mandatory for all FOF applications. The plan should be no longer than two pages of A4. The plan, together with any costs associated with it, will be considered and assessed by the normal peer review process. The data management plan should explain how the data will be managed over the lifetime of the project and, where appropriate, preserved for future re-use. Applications that do not have a data management plan will not be accepted. Further details can be found in the <u>grants handbook</u>.

Data Protection

Grants submitted via Je-S are done so under their <u>terms and conditions</u>. Please make sure you have permission from any relevant bodies before submitting any sensitive data. STFC will not be held accountable if data submitted has been done so without the relevant permissions sought.

Ethical considerations

Projects that involve holding or using sensitive information on individuals (for example facial recognition etc.) should ensure they conform to <u>UKRI's research integrity policy</u>. Although an ethical statement will not need to be submitted alongside any proposals, all the involved researchers should have a consideration of such requirements. STFC reserves the right to suspend any grants that do not meet these requirements.

All projects and activities the Fellow is involved with should conform to <u>UKRI Trusted Research and</u> <u>Innovation</u> practises.

STFC reserves the right to terminate any grants if there are any concerns over the above considerations.

ASSESSMENT

Panel assessment

Follow on fund applications are assessed by an independent panel comprised of members from industry and academia. View the current membership below. STFC reserves the right to change the panel membership if required.

Mark Bray – BAE Systems Ltd. (Chair) Derryck Reid – Heriot-Watt University (vice-Chair) Karen Aplin – University of Bristol Alexander Cherlin – Kromek Group Richard Bates – Glasgow University David Petyt - CERN Eva Vilella – University of Liverpool Konstantin Stefanov – The Open University Norman Maloney - OHM-E Technology Andrew Williams - European Southern Observatory Don Pollacco – University of Warwick Kathryn Welsby – STFC (Central Laser Facility) Philippe Wilson – Nottingham Trent University Des Gibson – University of West Scotland

When appointed to the panel, members are asked to sign a non-disclosure agreement covering all KE applications. Additionally, when any conflicts of interest that arise, the panel member will be excused from any discussion regarding the related proposal.

Confidentiality and Peer Review

STFC takes all reasonable steps to ensure that the contents of applications submitted to FoF are treated as confidential. All members of the Panel sign a non-disclosure agreement and peer reviewers must comply with the Research Councils Reviewer Protocols – details can be found on Je-S. Referees and Panel members are asked to declare conflicts of interest in relation to an application before they are asked to assess.

Each proposal will be assessed by external reviewers, one of whom must be nominated by the applicant. The applicant's nominated reviewer should not be a current or previous collaborator, a personal friend or family member, neither should they be from the applicant's or collaborator's home institution. Should it arise the referee is in violation of this, the nominated referee will not be invited to review. Applicants can use Je-S to indicate the reviewers or include this in a covering letter attached to the application and uploaded through Je-S.

Criteria for Assessment

Each criterion will be assessed by the panel, based on the information provided by the applicant and feedback from external reviewers. This score will be used to determine which projects receive funding. These assessment criteria are:

Technical Excellence

- The proposed project must be based on STFC research and include a program of excellent technical development.
- The proposal should be feasible from a technical standpoint and build on a strong underpinning science case

Note, it is appreciated that FoF is aimed towards developing a proof-of-concept, and so is more high-risk in terms of success

Potential for Social and Economic Impact from the proposed research

- The size of the commercial potential of the idea, including potential benefits to the UK both economic and societal.
- Consideration of the market need, IP position and commercialisation strategy should be identified.
- Likelihood to deliver

Development plan

- The quality of the plan for technical and commercial development, with evidence of how the project will be managed.
- Consideration of potential partner engagement as the technology matures towards commercialisation
- Consideration of the future of the project after FoF funding

Added Value

- The extent to which the resources requested, relative to the anticipated outputs, represent an appropriate investment of STFC funds (value for money)
- The potential impact the project could have in relation to the size of the award
- Strategic value within the STFC programme.

Response to reviewers

Each applicant has the opportunity to respond to the referee comments before the panel meeting. Applicants should be aware that we will request your response to referees approximately 4-6 weeks following the closing date of the call. All key dates (including an estimated date for this response) will be communicated to all eligible applicants following the closure of the call.

The PI Response should be no more than half a page of A4 per reviewer (Arial font size 11), and be no longer than 2 pages in total, unless otherwise stated by the office. Failure to adhere to these guidelines could result in your PI response not being taken forward to the panel meeting. For more details please see the <u>Je-S helptext</u>.

RESUBMISSION

Unsuccessful applications cannot be submitted again for at least 12 months after submission. Feedback will be given on all applications, and all decisions made by all panel members are final.

Proposals invited for resubmission, may do so to the next call provided all concerns are addressed. Please note that resubmission requires an entirely new submission to Je-S and will be given a new reference number. It is NOT connected to the previous application, and therefore must contain a new Je-S pro forma, Case for Support etc.

The panel will not have access to the original application during assessment. As such, the applicant should submit a cover letter in which they summarise the responses made to the panel comments, addressing the main concerns raised and how they have been addressed. The resubmission will be peer reviewed again, by the same referee's as the original proposal where possible, who will be

asked to review the changes to the proposal and assess whether the changes have satisfied the feedback from the Panel.

SUCCESSFUL APPLICATIONS

Grants are awarded under the <u>terms and conditions</u> of UKRI. Please see <u>UKRI privacy note</u> for more details. Please note, a collaboration agreement between all collaborators must be sent to the STFC office and include details on the ownership of any IP before funding can start. Failure to do so will mean the grant cannot become active. For further details please see the research grants handbook section <u>7.2</u> and <u>7.4</u>.

RESEARCHFISH

All award holders are required to submit any outputs from their FOF project on the <u>Researchfish</u> <u>platform</u>. Award holders are required to provide information about outputs arising from their work annually during the award period, and normally for at least 5 years after the award has terminated. The KE Panel will monitor outputs on all FoF grants.

CONTACTS

We encourage potential applicants to contact the office to discuss their proposal, and the STFC office will be able to help and provide advice on applications where appropriate. Please contact the Senior Programme Manager Wendy Carr (wendy.carr@stfc.ac.uk) or Programme Manager, Ed Mansfield (edward.mansfield@stfc.ukri.org) with any queries.

USEFUL LINKS

Below is a list of links which the applicant may find useful when applying for STFC grants:

UKRI Principles of Assessment and Decision Making Researchfish, Equality of opportunity Unconscious Bias JeS Handbook STFC Grants Handbook UKRI Terms and Conditions

ANNEX 1: CERN, ESO OR ESRF SCIENTISTS AND ENGINEERS

Any applications made by applicants working at international facilities should note that the project outputs must benefit the UK economy

IPS applicants from CERN, ESO or ESRF are welcome, and should be from a scientist or engineer performing one of the following functions:

- Research, development, or professional work including academic study and/or supervisory responsibility
- Leadership of research, development, or professional work involving a wide range of academic study and/or strategicresponsibility
- Responsibilities of the highest level of scientific and/or management complexity, originality and wide distinction

All applicants from CERN, ESO or ESRF should provide a cover letter along with their proposal stating confirmation that they meet the eligibility criteria as set down above. Furthermore, the applicant's contract of employment with must cover for at least length of the grant. The Principal Investigator need not be a UK citizen.

Completed research proposals must be approved by the appropriate Head of Department or equivalent at the host organisation. Applications from CERN should be submitted through the Director of Technology Transfer and Scientific Computing. Applications from ESO through the Head of Administration.

Please note:

- The collaborating organisation must have its research or manufacturing base in the UK.
- Funds requested should be given in pounds sterling only
- Estates and indirect costs will not be applicable to IPS grants awarded to CERN, ESO or ESRF. The estates and indirect costs addition is covered in the STFC subscription payment to CERN, ESO or ESRF, and so (if the grant is awarded), STFC will pay 80% of the full <u>excluding</u> estates and indirect costs.

Successful IPS awards to CERN, ESO, and ESRF will be subject to the standard terms and conditions of STFC awards, although additional grant conditions might be required on individual grants.

ANNEX 2: SOFTWARE DEVELOPMENT PLAN GUIDELINES

Over the last 5-10 years, the software industry has reached the conclusion that the central problem regarding software quality and major software project failures is one of inadequate management. This annex provides some guidelines to the applicant in terms of planning (including cost and timescale estimation), management of the project, and the quality of the software deliverables. If a proposal is asking for public funding to develop a system, then a reasonable expectation of the application is to provide enough visibility to be assured that:

- The stated goal is to produce software that will be deployed and maintained as a semicommercial product.
- There is an understood set of project objectives, sufficient to determine a reliable project cost.
- There is an understood development process with identified points for management review, using a methodology that provides some level of control and design evolution.
- There is an understanding of the project cost and its profile throughout the project.

A minimum requirement for any software development project should be:

- Identify a lifecycle model that will be used as a basis for the management of the project
- Identify the top-level requirements of the project
- Identify the deliverables of the project
- Identify the key lifecycle milestones of the project and their products (including documentation and the availability of any prototypes) and understood success criteria

The proposal need not necessarily identify all of the above but should provide enough detail and justification to present a convincing case that the development process is understood. Included in the proposal, a software development plan is required for all software related projects. The detail and size of the plan should reflect its relevance in the project. Where software development is a minor part of the project, the plan need not be extensive. However, if it is critical to the success of the project and/or takes up a significant portion of the project time, then the detail should reflect this fact. The plan should be included within the six-page case for support (and not submitted as a separate document), addressing the project management requirements including the key milestones. The milestones should have nominal dates assigned to them.

In addition to the development plan, there should be evidence of a cost estimation process and allocation of sufficient resources (including staff). If there is not enough visibility to this cost estimation, then it will be assumed that it has not been done adequately and that the project is at risk of not reaching its objectives.

Risks

This should relate to the relative priorities of the project deliverables/functionality - if there are specific areas of high technical/project risk (to be identified), how are these to be managed? If the project needs to be de-scoped to complete on schedule or within cost, what measures will be taken?

The measures that will be taken to minimise cost/risk should be stated: e.g. use of COTS equipment or commercial software, software design tools, software development tools, change management tools, configuration management tools, requirements tracking tools, defect tracking tools.

Project Governance / Oversight

The governance and oversight arrangements should be stated if the project PI is not suitably qualified to oversee software development. Otherwise it will be assumed that the PI is responsible for this section of work.

Development approach Methodology

There should be an understood development process with identified points for management review, using a methodology that provides some level of control and design evolution.

Examples of types of methodology include the "Waterfall" lifecycle model, a rapid prototyping / iterative or incremental delivery methodology.

Requirement analysis

The user needs should be clearly stated in the Case for Support and should encompass both functional requirements and non-functional requirements such as usability, resilience, performance and supportability.

The relative priorities of the project deliverables/functionality should be stated.

Design

The appropriate design activities should be stated, which may include conceptual, architectural, preliminary, or detailed design.

Testing approach/Quality Overview

The end product should be robust, practical and meet the needs of the users. Explain what measures will be taken to assure software quality: ideally a software development/quality plan.

Again, such a plan does not have to be a large part of the Case for Support, but it does need to address how the project will assure that it will meet its design objectives, as represented by the requirements.

The testing activities may include coding testing, unit module testing, subsystem testing, software/hardware testing, system integration testing and user acceptance testing.

Implementation / Deployment

The implementation activities, and any post-implementation and maintenance activities should be stated.

Explain what software documentation should be produced – systems and user documentation.