Grant funding Mechanism Review – Options for consultation

In the Options set out below, it has been assumed that:

- The outcome of this review will need to be mindful of the recent Government statements on the need to significantly reduce administration costs in the public sector. It is unlikely that STFC would be able to implement an option that required increased administration effort.
- The peer review of construction projects would still be undertaken by PPRP, on behalf of PPAN, as it is able to review across the STFC portfolio using standard assessment criteria.
- Where appropriate, construction projects can be funded for longer than three years to provide a degree of confidence for international partners and planning certainty for the UK groups.
- The review point for such projects would be the triennial programmatic review, where the continued strategic priority of all construction projects would be tensioned against each other and exploitation activities, as at present.

Option 1 - 3-year standard grants

In this model, all exploitation activity (including project maintenance and operations (M&O) for particle physics projects) would be funded via 3-year (maximum) standard grants. The detailed model would be open to variation for the different science communities, depending on the structure of their programme and projects, but the overall principle of 3 years support would be common across the STFC programme. Some of the variations of this option would also encourage and facilitate more inter-university collaboration.

The 3-year standard grants could be consolidated around a single project, e.g. ATLAS, where groups involved in that project could submit a series of linked grants (a single case for support and multiple JeS forms). Proposals could also be submitted by a single university for exploitation of a portfolio of smaller projects or for a single project. This would be the norm for theoretical work, although linked grants under a single theme, e.g. lattice QCD, would be possible. Funding for generic R&D would be included in these grants.

As a further variation on this option, support for project-specific R&D could also be funded via this route, thus negating the need for a separate PRD scheme.

The review of these proposals could either be undertaken in one exercise every three years (the current PP model) or in a phases over three years (the current Astronomy Grants Panel (AGP) model), but if the latter, as now, STFC would have to manage the available funding if the applications were not evenly spread over time.

In this model, a typical group, involved in say four projects, could have a portfolio of four individual grants each linked with other institutions with a variety of start dates. This would increase the administrative overhead at universities, but it would not be greater than that generated by standard grants from other Research Councils, e.g. EPSRC. Alternatively, a group could have a 3 year grant supporting all their exploitation projects, with a greater degree of flexibility to move resources and staff between projects.

A variation on this model would be for whole project lifecycles (construction, maintenance and operations) to be reviewed and managed outside of the grants panel mechanism, as some are in Astronomy, which would focus the proposed 3-yr standard grants (Option 1) solely on exploitation. Under this approach construction project proposals would include an estimate of future operating costs (i.e. M&O, Post Launch Support), although award of post-construction phase operating costs would be considered by an appropriate review mechanism and awarded as separate grants. While this would make sense from an operational point of view, a possible disadvantage of this might be to put up a barrier between the movement of resources between exploitation and M&O. Note this has not proven to be an issue for Astronomy who have adopted this scheme for many years.

The advantage of Option 1 would be increased flexibility for STFC in terms of grants funding planning, especially when future budgets are uncertain and could bring increased flexibility for groups to move exploitation resources between projects if each group had one grant for all their exploitation activities or between institutes in the case of multi-institute grants. The disadvantage is that groups would be funded for only 3 years at one time and this could have implications for planning, retention of key skills etc. However, the current rolling grants are now very heavily tapered in years 4 and 5 so, in reality, the additional impact might not be that significant.

As can be seen in the table below, Option 1 could potentially increase the volume of proposals submitted to STFC (although many would be smaller and less complex than Rolling Grants to prepare or peer review). Therefore, in supporting this option, the community would have to recognise that, because of the need to reduce administration costs, other measures to reduce the administrative burden would need to be introduced. This may be achieved, for example, through the submission of more consolidated proposals where this was appropriate, the early sifting of proposals and the introduction of more efficient peer-review processes.

Likely impact on number of proposals (cases for support, not JeS forms) received over a three-year period

	Number of RG and SG proposals received over last 3 years (expt and theory)	**Number of (multi-university, consolidated, single major project) proposals expected under option 1 - over 3 years (all expt)**	**Number of (single university-single project or multiple (smaller) project) proposals expected under option 1 - over 3 years (expt and theory)**

PPGP	**30 RG, 70 SG**	**6**	**102**
NPGP	**9 RG, 37 SG**	**Very few***	**71**
AGP	**48 RG, 300 SG**	**Not relevant to Astronomy exploitation**	**450**

* In NP it would make little difference to whether grants were consolidated around a single project or via multiple grants to individual universities. For exploitation work in NP, the community typically works either in small groupings (perhaps up to 3 institutions) or in single-institution mode.

Option 2 – 6-year Core Grants

This option would provide, in addition to the 3-year standard grants outlined in Option 1, a degree of funding stability for key generic "core" staff (technical, engineers*, IT and administrative staff) and a low level of fEC for the PI managing the activity, through six-year grants. These grants would be reviewed at the beginning of the fifth year, when funding for the next six-year period would be considered.

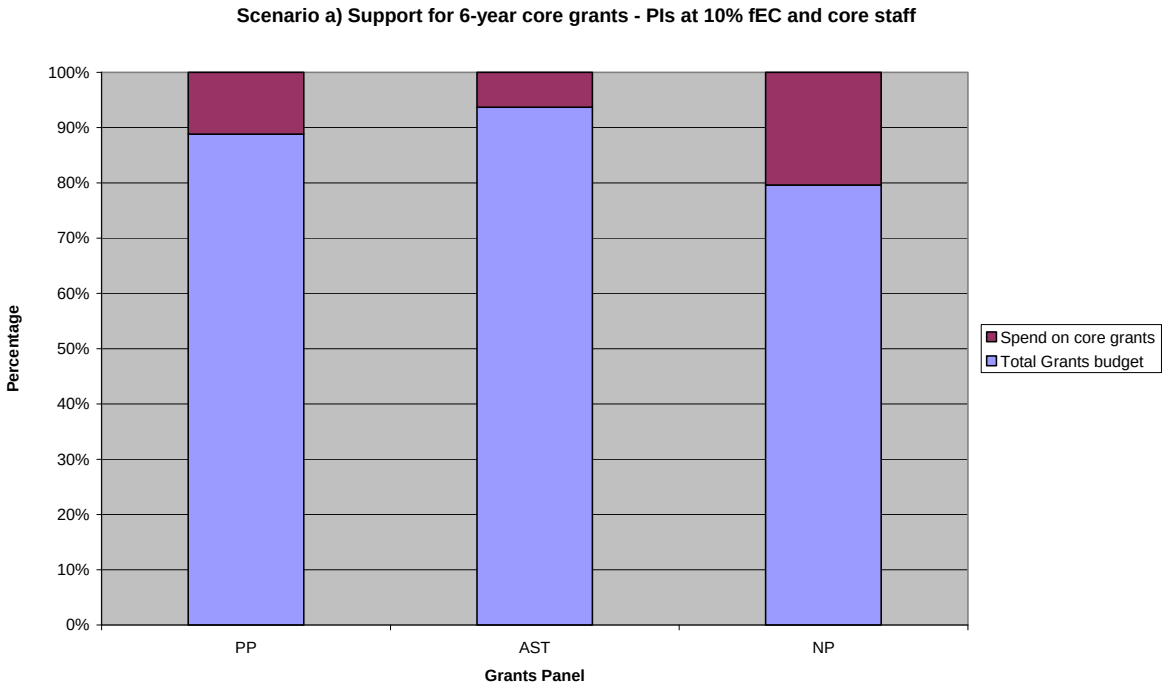
* A person with hardware (design, mechanical or electronic) expertise, rather than a career physicist.)

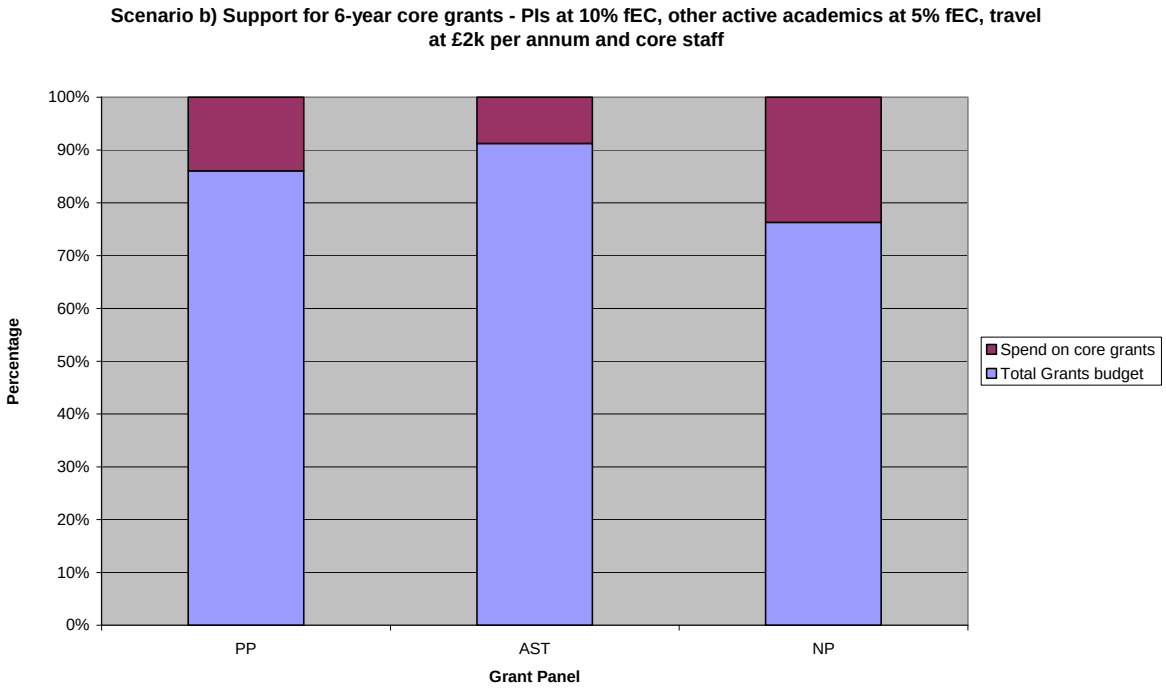
In supporting this option, the community would have to recognise that, because of the need to reduce administration costs, the volume of proposals submitted would need to be controlled in some way, for example, through more consolidated proposals.

The level of funding provided by the core grant would depend on the number of groups receiving such support and the level of support provided (see examples below). This model is built on the premise that some low level of key "core" expertise and effort is required by the community, regardless of the projects they are involved in, to maintain generic capability. It is expected that project-specific core staff would be sought on the standard grants.

The Core Grant proposals would be peer reviewed all at the same time by the respective Grants Panels to allow them to assess the UK capability requirements as a whole. Core funding in the national laboratories would be folded into this process with PPGP reviewing RAL (PPD), AGP reviewing UK ATC and RAL (SSTD) and NPGP reviewing Daresbury Laboratory.

A variation of this scheme would be to fund, in addition, a low level of fEC and travel funds for research active academic staff above a quality threshold (in addition to the PI running the Core Grant), rather than all through the standard grants. This would enable high-quality research groups, for example, to maintain involvement in international collaborations through periods when funding for standard grants was restricted. However, funding a large number of academic staff in this way would have an impact on the number of Core Grants that could be funded and on the funding available for Standard Grants.





Option 3 - 5-year rolling exploitation grants alongside Standard Grants (the current system)

This option would retain 5-year grants with a three-year review point, but because of the reduced flexibility this would offer over the longer term, combined with recent and possible future funding cuts, the level of support/number of grants that could be funded would be at a significantly reduced level if the grants were not tapered in years 4 and 5 and a guarantee was given that that grants

would not be cut at the review point. Funding would also have to be set aside for standard grants. With this option, careful consideration would need to be given to the criteria for the award of (fewer, smaller) rolling grants, and also for the long-term future of those groups who do not receive them.

The number of rolling grants (exploitation/theory) expected to be supported in each area (PP, NP and Astronomy) in the future given current budgets. Astronomy figures assume the steady state after all groups have been through the 3-yearly review. All figures assume a lower threshold of at least three RAs for a group to receive a rolling grant (where grants fall below this threshold they are shown as converted to standard grants).

	Particle Physics		**Astronomy**		**Nuclear Physics**	
	Current	**Future**	**Current**	**Future**	**Current**	**Future**
Rolling Grants	**30**	**15**	**48**	**36**	**9**	**0-4**
Converted to Standard Grants		**17-22**		**25**		**20-30**

As can been seen from the table above, this will also increase the number of proposals submitted, but this not expected to increase the administrative effort in STFC or the universities, as standard proposals are much simpler to prepare and peer review.