

# **SECTOR FEEDBACK FOR THE NATIONAL SPACE INNOVATION PROGRAMME (NSIP)**

**November 2021**

# Foreword



We are at a seminal moment in the UK and indeed global space industry. The chance for space to play a key role in mitigating climate change and our technological future through full industrialisation in space is upon us. To achieve that requires strategy, policy, regulatory clarity and investment to match.

The UK's relationship with European Space Agency has defined the UK's space capability and rightly features as a key component of the National Space Strategy. But the UK also needs a substantial and reliable national programme to allow the UK to compete internationally on the world stage with countries like France, Germany and Italy, which have dedicated national funding alongside their ESA investments.

This is why my predecessor as President of UKspace, Andy Green, called for the creation of the National Space Innovation Programme in Prosperity from Space in 2018. This led to a pilot phase of the programme in 2020 and supported a first wave of projects to solve some of our greatest challenges - from slashing carbon emissions to protecting the UK's critical services from harmful cyber-attacks.

A scaled-up National Space Innovation Programme is needed more than ever to play a key part in helping the UK unleash innovation in this exciting sector. NSIP will stimulate innovation in organisations, of all sizes; large companies, SMEs, micro-companies, institutions, and universities, and to do so for the benefit of the UK economy as a whole. It will help the UK to succeed in important geographical markets by developing bi-lateral activities. This will increase innovation in the sector, make the UK a more attractive place to grow a space business and unlock opportunities for international trade in space.

To reap the benefits it needs a jointly developed work programme to help capture the opportunities which industry and academia identify in the marketplace. It needs to be predictable and have a budget which can be relied on year-on-year with a schedule which allows organisations to plan. And it needs to stimulate genuine innovation in technologies and markets to make a real difference.

The sector will play its part in funding crucial sector innovation and looks forward to working together with government to develop the future of the NSIP to deliver a prosperous space economy for the benefit of us all in the UK.

Will Whitehorn, Co-chair Space Sector Council, President UKspace

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# Executive Summary

The UK space sector has consistently highlighted the need and benefits of a National Space Innovation Programme to complement the UK's investment through the European Space Agency.

An Expressions of Interest process run by the Space Growth Partnership which reported in 2020 highlighted strong demand for a National Programme from businesses and universities with over 80 organisations contributing ideas for future innovation programmes.

The UK Space Agency successfully ran a pilot National Space Innovation Programme in 2020/21. A necessarily restricted timeline and budget presented significant challenges for applicants and the Agency alike but it nonetheless attracted 91 applications and resulted in 27 innovation projects being taken forward.

This report [published by the Space Growth Partnership] presents sector feedback on the pilot, identifies the lessons identified from the 20/21 pilot programme and proposes changes for future programme delivery. The proposed changes are summarised below.

## Programme Design:

1. An NSIP strategic work programme is developed with a timetable published before the start of the financial year to enable large organisations to allocate their R&D budgets during their own financial planning cycle.
2. Funding opportunities are open (by scope) to support a broader range of innovations.
3. The programme allows a variety of projects (feasibility studies, germinator projects and development projects) potentially with different grant funding levels, as may be appropriate, for each.
4. Adequate time is provided for responses to the funding opportunities (at least 8 weeks).
5. The programme enables projects to be run over multiple financial years to allow projects adequate time to deliver genuine innovation into the space sector.

## Pre-competition Activities:

6. Run sector briefings in advance of funding calls to provide a greater understanding and awareness of the call.
7. If appropriate, representatives of international collaborators or end-users of potential services are introduced by UK Space Agency to help the market success of the innovations being proposed.

## Competition Design:

8. A wider range of funding instruments is added beyond co-funded activities, for example fully funded competitive studies.
9. Funding levels, eligible costs and grant funding agreement terms and conditions including indemnity are reviewed.

### Competition Feedback:

10. Feedback is provided on all proposals.

Many of these are standard practice for competitions run by Innovate UK, ESA and Dstl. The UK Space Agency should, where possible, consider implementation of the above changes for future delivery of NSIP. Some of the suggestions may also have applicability to other UK Space Agency grant funding opportunities.

As the objective of NSIP is to stimulate innovation in the UK space sector, to help the sector create growth for the UK against global competition, exploring options to refine the delivery of NSIP are encouraged.

The space growth partnership looks forward to working with the Agency and wider Government Departments to build upon the delivery of the pilot programme in FY 2020/21.

# Introduction

The National Space Innovation Programme (NSIP) was developed in response to a request from the UK space sector for a national programme specifically to support innovation and international collaborations in the sector<sup>1</sup>.

It was designed to support both industry and academic organisations to increase innovation with the objective of developing new technologies, products and services which will enable the UK space sector to become more competitive and to generate more wealth for the UK.

In FY 20/21, the NSIP pilot consisted of two distinct competitions:

- A national programme to provide grant funding to UK project teams to support the development of innovation ideas in themed areas.
- An international programme to raise the UK space sector's export potential and to support UK space researchers to collaborate with organisations around the world on space projects in other areas.

The NSIP National competition opened 22 July 2020. It focussed on innovations in the areas of earth observation to tackle climate change and ubiquitous communications for enterprise, consumers and government. The grant was between £200K and £2m.

NSIP International competition opened 1 October 2020. It focussed on international collaborations. The scope included: Australia (Earth observation), Japan (Satellite applications), Canada (Robotics), global scope (Space safety and sustainability, including space debris), global scope (Space science), France (Earth observation and climate), India (Earth observation and climate and/or sustainable development) and UAE (Disaster relief).

The NSIP funding calls attracted over 90 project proposals, 61 applications to the NSIP National call, and 31 to the NSIP International call.

Following review of the proposals by external assessors and due diligence checks, 27 project teams received grant co-funding to undertake their project work (NSIP National: 22 projects, NSIP International: 5 projects). The NSIP projects were led by industry, academia and research organisations from across the UK and summary information about the projects was published<sup>23</sup>.

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<sup>1</sup> Space Growth Partnership: A Call for Evidence in Support of a National Space Innovation Pathfinder.

<sup>2</sup> <https://www.gov.uk/government/news/uk-space-sector-gets-1-million-government-boost-to-support-international-innovation>

<sup>3</sup> <https://www.gov.uk/government/news/government-funds-uk-companies-at-the-forefront-of-space-innovation>

# Evidence Collection

This report, produced by the Space Growth Partnership and commissioned by UKSA, includes feedback on the NSIP pilot from two primary sources:

- An on-line questionnaire (open to anyone)
- Three facilitated workshops (academic organisations; large companies; and SMEs).

The UK Space Agency and the Space Growth Partnership would like to express thanks to the individuals who responded to the survey and participated in the workshops.

The report identifies what worked well in the NSIP pilot and what changes are requested to future NSIP competitions to increase participation and improve the contribution that NSIP can make towards the growth of the UK space sector.

## Findings:

### Sector Support for NSIP

The UK space sector welcomes the establishment of the National Space Innovation Programme. Throughout the information gathering process, strong support for a national innovation programme was evident throughout the sector. NSIP is seen as an important means to accelerate innovation and economic growth amongst UK space companies, universities and research organisations.

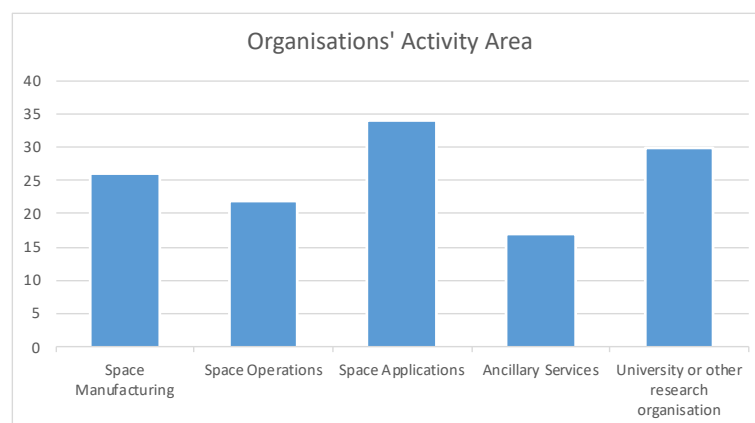
National programmes are run by other countries and without a national scheme, the UK space sector regards itself as having a significant competitive disadvantage.

“NSIP is a critical programme for the UK space sector”  
- *large space company*

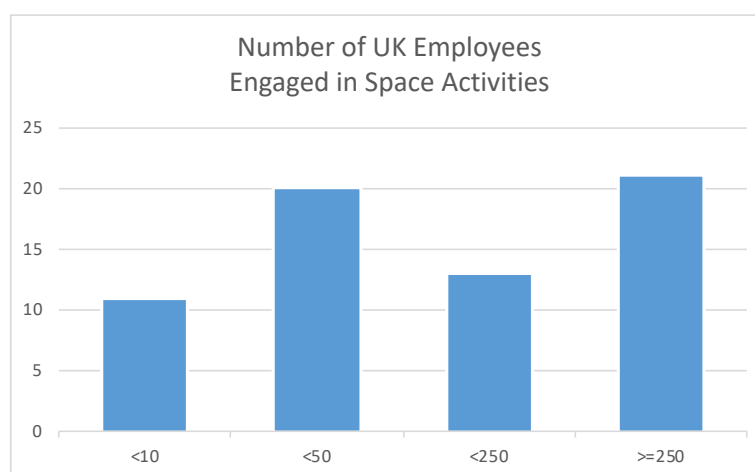
## Findings from the Online Survey

The survey attracted 65 responses from 50 distinct organisations (more than one response was received from a number of organisations).

There were responses from organisations across all activity areas in the sector; manufacturing (25 responses); space operations (21); Space Applications (25) auxiliary services (16) and university or research organisations (30). Several organisations operate across more than one activity area.



There was a distribution of different size organisations, as measured by number of UK employees engaged in space activities; <10 employees (11 responses); <50 employees (20); <250 employees (13) and  $\geq 250$  employees (21).

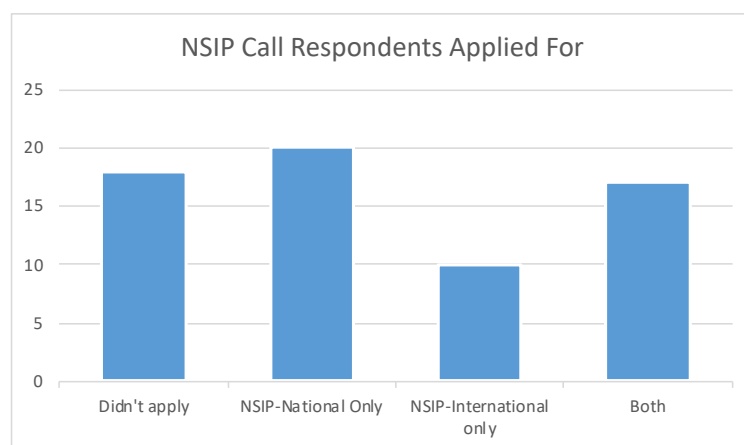


Therefore, we are confident that the responses received provide us with a cross-section of views from the UK space sector.



## Respondents' Participation in NSIP

Amongst organisations responding, 18 did not apply to NSIP; 20 applied to the national call only; 10 applied to the international call only and 17 applied to both calls.



Again, we are happy that the responses to the online survey provided us with a good sample from organisations who had or hadn't participated in the 20/21 NSIP Pilot. Having responses from those who had not participated in either NSIP funding opportunity meant that reasons for non-participation were also captured.

## Reasons Organisations Did Not Apply:

The survey examined the reasons respondents did not apply to the national call, the international call and to both calls.

### National Call

The most common reason organisations did not apply to the national call was that their project idea did not match the call themes (6 respondents). The next most common reasons were that there was not enough notice to develop a proposal (3); or that they were only interested in the international call (3). Other common reasons were that organisations were unaware of the opportunity (2) or that there was insufficient time to spend the grant funding (2).

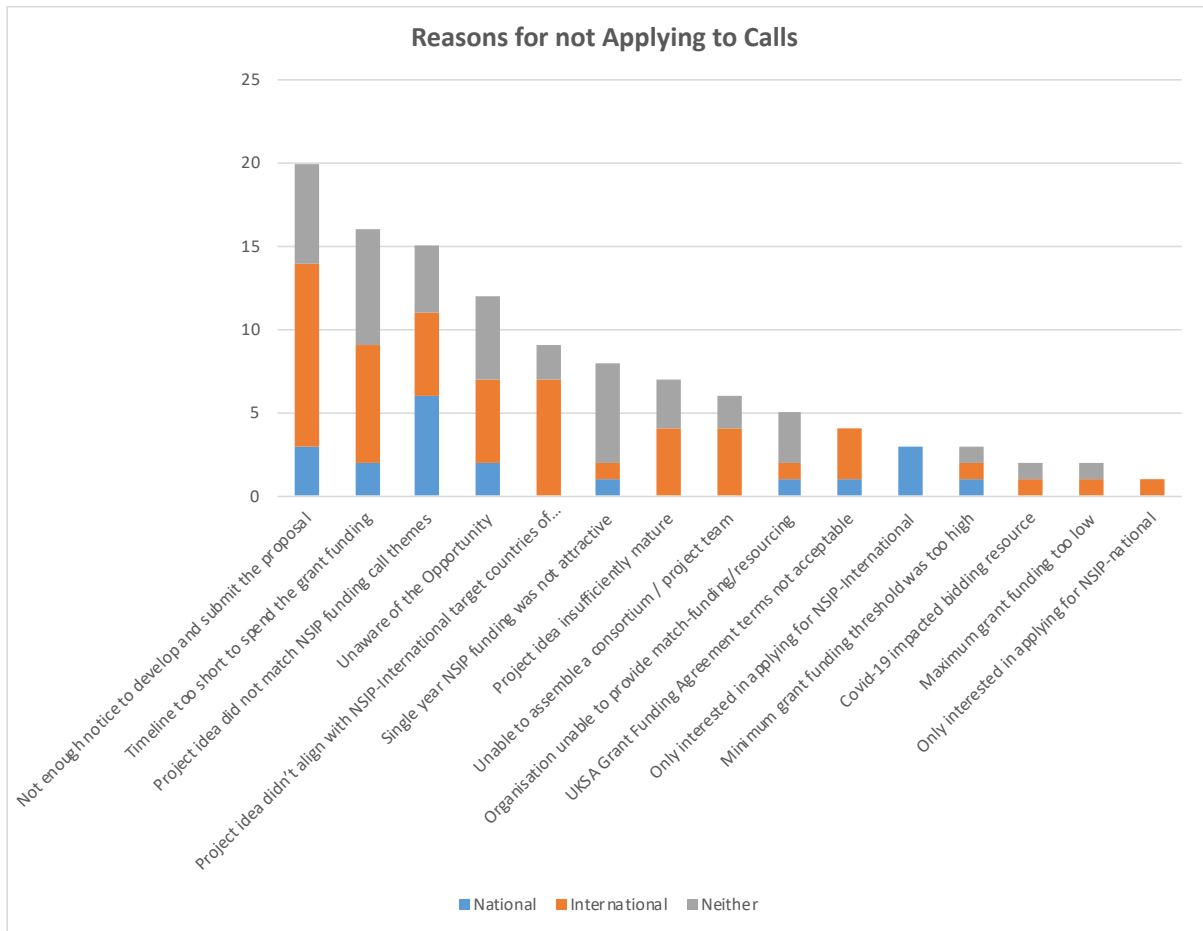
### International Call

The most common reason organisations did not apply to the international call was that that there was not enough notice to develop a proposal (11 respondents). The next most common reasons were that organisations' project idea did not align to the target countries of interest (7); or there was insufficient time to spend the grant funding (7).

### Neither Call

For organisations who did not respond to either call, the most common reason was that

that the timeline too short to spend grant funding (7 respondents). The next most common reasons were there was not enough notice to develop and submit a proposal (6); or that single year NSIP funding was not attractive (6).

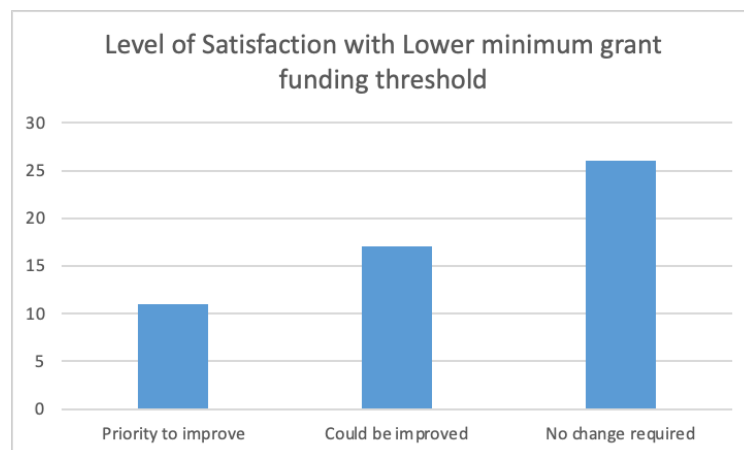


The aggregate conclusion is that the most common reasons were that the timelines were too short to develop a proposal; too short to spend the grant funding; or because the innovation idea did not match the call themes (this despite the fact that the SGP and UK Space Agency had earlier solicited topics for call themes).

## Areas That Worked Well:

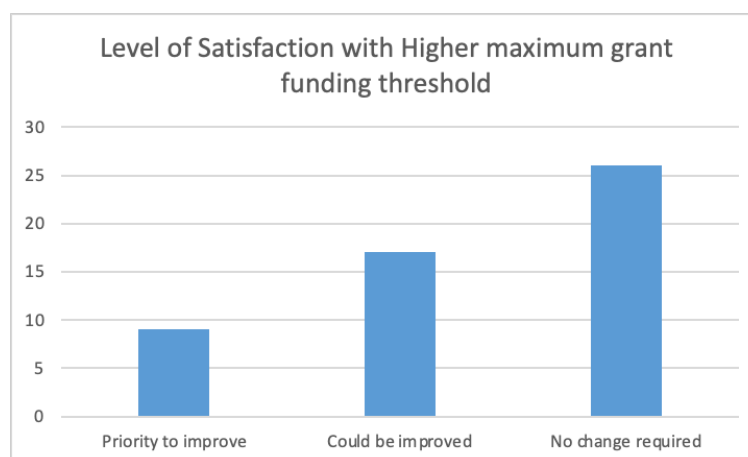
### Minimum Grant Funding Threshold

The level of satisfaction with the minimum grant threshold was evident; 11 responses indicated priority to improve; 17 indicated could be improved; 26 indicated no change was required.



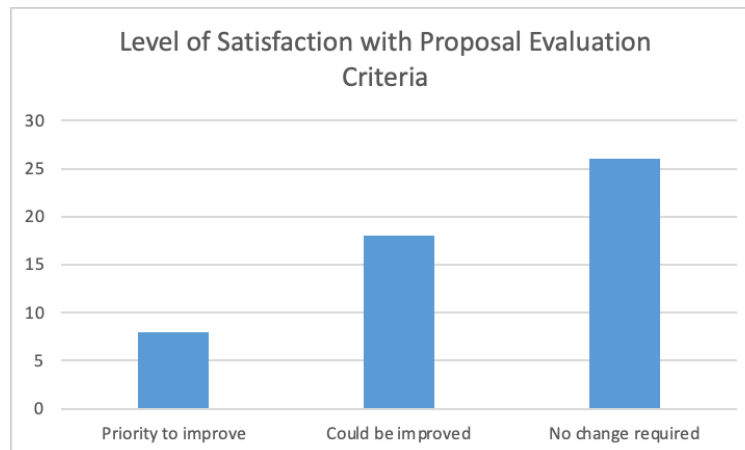
### Maximum Grant Funding Threshold

The level of satisfaction with the maximum grant threshold was also high; 9 responses indicated priority to improve; 17 indicated could be improved; 26 indicated no change was required.



### Proposal Evaluation Criteria

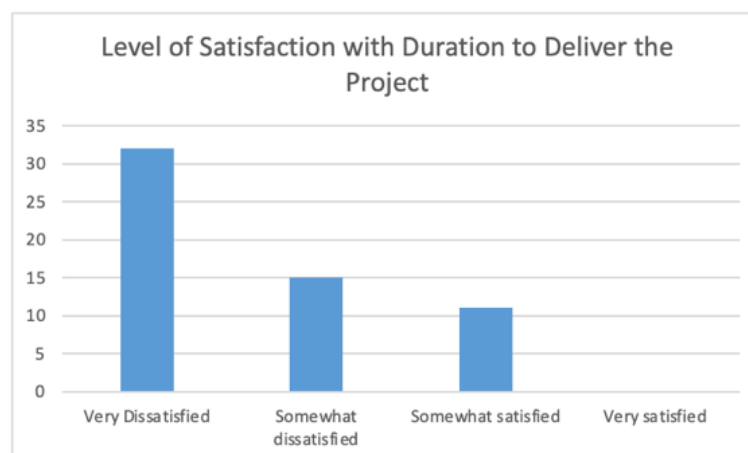
There was also a high level of satisfaction with the proposal evaluation criteria. 8 responses indicated priority to improve; 18 indicated could be improved; but 26 indicated no change was required.

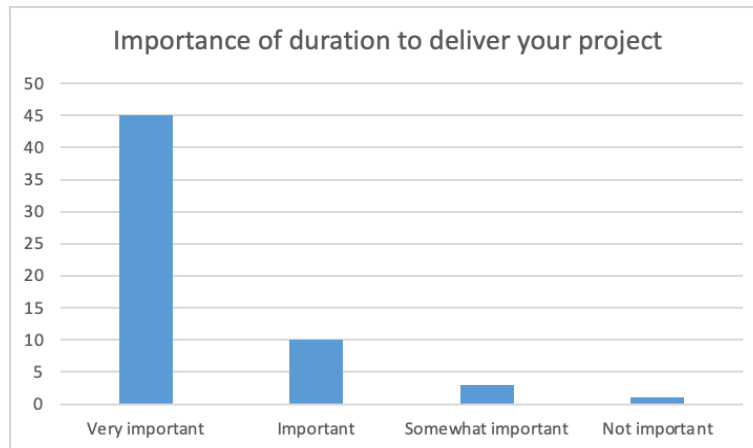


### Areas That Could be Improved:

#### Duration to Deliver the Project

The key area for improvement was clearly the available duration to deliver the project. 32 respondents indicated they were very dissatisfied, 15 were somewhat dissatisfied and 11 somewhat satisfied. None were very satisfied. The importance of adequate duration to deliver the project in future calls was also highlighted. 45 respondents regarded it as very important and 10 respondents as Important.





“The FY constraint left little time (2-3 months) to implement a real project”.

- UK University

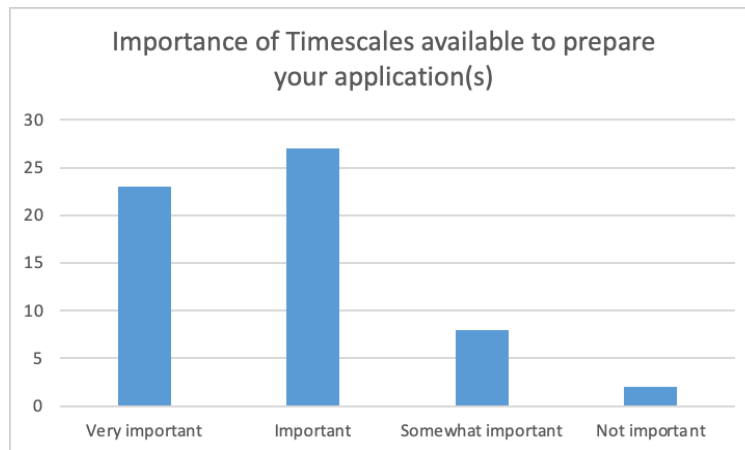
“Any project worth being considered would have to extend beyond the timeline”.

- UK University

#### Time to Prepare a Proposal

The time allowed to prepare a proposal was also highlighted. The level of satisfaction with the time allowed to prepare a proposal indicated that 16 respondents were very dissatisfied, 22 somewhat dissatisfied, 16 somewhat satisfied and only 3 very satisfied. 39 respondents regarded it as very Important and 21 respondents as important to address in future calls.



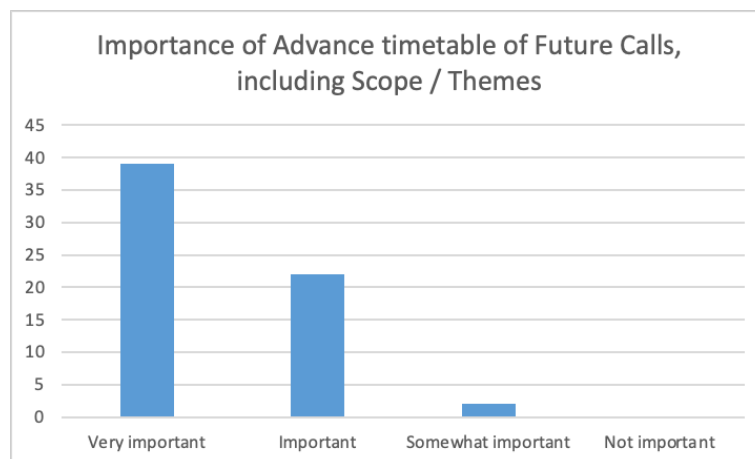


“[The] International call was extremely short notice with no time to prepare an international consortium (including identify international funding) and submit proposal”.

- *space company*

#### Advance Timetable of Future Calls & Scope

The need for advance notice was highlighted. 39 responses identified the importance of having an advance timetable for future calls and rated this as very important; 21 responses identified it as important and only 1 as somewhat important.

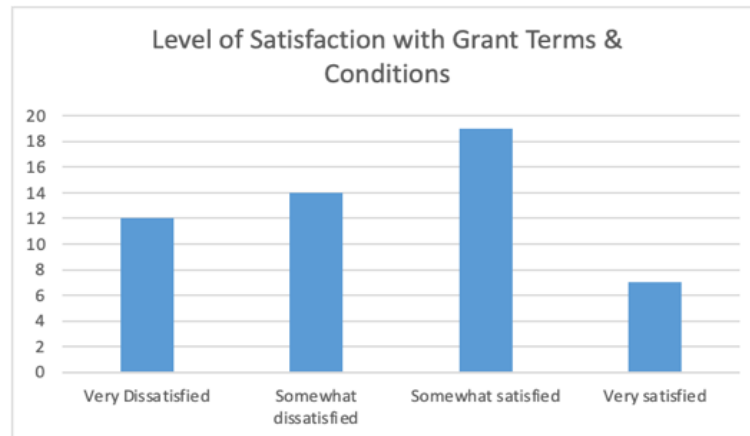


“The call was too late in the year so most of the R&D money had already been allocated.”

- *large space company*

### Grant Terms and Conditions

The need for improved terms and conditions was highlighted. 12 responses were very dissatisfied; 14 were somewhat dissatisfied; 19 were somewhat satisfied; 7 were very satisfied.



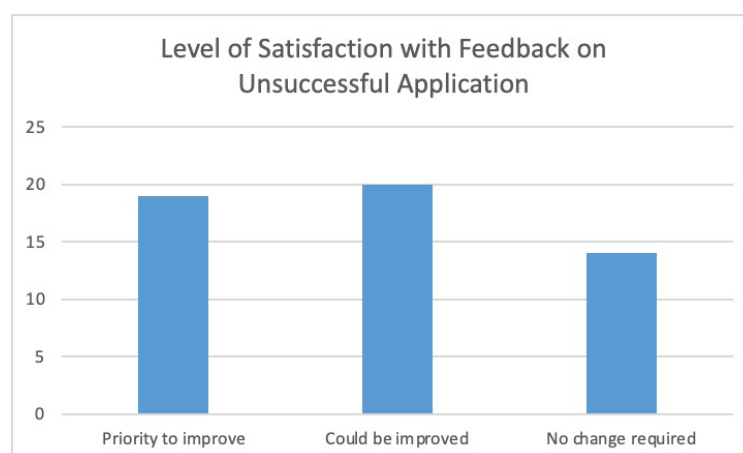
"Funding levels not attractive to commercial organisations in comparison to others e.g. H2020. Therefore, industrial R&D environment more favourable in mainland Europe"

- *large space company*

The conclusion is that in order to be competitive with other sources of funding available in Europe, NSIP should match grant levels and terms and conditions with the alternatives.

### Feedback on Unsuccessful Proposals

The need for improved feedback was highlighted. 18 responses indicated a priority to improve; 20 indicated could be improved; and 14 indicated no change was required.



“...the score of our proposal was never received ..... the amount of work that goes into these proposals is significant, and during a time in the summer when many were on vacation. Scores absolutely must be provided and this is standard practice in other institutional procurement processes.”

- *large space company*

The conclusion is that it is important to provide feedback so that organisations understand how they can improve their submissions in future.

## Conclusions from the Survey

The conclusions are:

Criteria	Objective	Change Requested
Minimum grant funding threshold	To attract projects of reasonable size	No change required.
Maximum grant funding threshold	To ensure a balance of projects can be funded	No change required.
Proposal evaluation criteria	To maintain a high standard of innovation	No change required.
Time to prepare a proposal	Allow sufficient time to develop proposal and consortium	Allow longer to develop proposals.
Duration to deliver the project	Allow sufficient time for proper innovation	Allow significantly longer to deliver the project.
Advance timetable of future calls & scope	Ensure organisation R&D budget is available	Publish advance timetable including scope of calls at start of financial year.
Grant terms and conditions	Ensure NSIP is attractive compared to alternatives	Offer more favourable terms and conditions - match H2020 or other funders.
Feedback on proposals	Allow organisations to understand where their proposals were good and where to improve.	Provide feedback on all submitted proposals.
National Themed Topics	Avoid missing opportunities for innovation	Use an open call for innovation ideas.
International Target Countries	Avoid missing collaboration opportunities	Allow open choice of partner countries



# Findings from the Workshops

## Longer term approach needed for innovation

- It was pointed out that genuine innovation takes time. Multi-year development programmes are absolutely essential to enable organisations to do development in a methodological manner; an innovation programme which supports multi-year projects with multi-year funding is therefore essential.

## Programme Scope

- It was identified that innovation is opportunity driven. Waiting for a funding call that fits the innovation means that organisations could wait forever, and the innovation would be lost to the UK. The request was made that organisations need to be able to propose any project (by topic). NSIP therefore needs to be (or at least include) an open call.
- The request was made that to capture the full range of opportunity, NSIP needs to support a wide variety of projects – including market studies, feasibility studies, and product developments – potentially at different levels of grant as appropriate.
- Publishing an advance timetable of calls together with their scope is seen as essential by large companies because they set their R&D budgets at the start of the financial year and may not have flexibility to participate in calls unless they have funding already allocated in the budget.
- It was stressed that levels of grant, and terms and conditions need to be the same as ESA or Innovate UK. If they are less favourable, including committing to unlimited liability which is unacceptable to some large organisations, then they are likely to apply to Innovate UK or ESA in preference.
- Organisations expressed the importance that NSIP define eligible costs consistently with either Innovate UK or ESA. This is needed to reduce uncertainty amongst finance teams and reduce the risk of bids failing internal sign off.
- There was strong view that in future the UK Space Agency should use Innovate UK as the delivery mechanism to run future NSIP calls. Innovate UK is seen as having acceptable grant terms & conditions, supports multi-year projects, has a well understood on-line process, has good assessment, and provides feedback. It also has an on-line application process. UK Space Agency could still set the scope of the competition.
- If these issues were addressed, organisations would submit projects with larger scope and which would deliver significantly greater innovation.

“If the issues were addressed, we would have proposed between 3x and 4x the value of the projects that we actually were able to submit.”  
- large space company

## How the UK Can Better Stimulate Innovation

### Procurement vs Grant Funding

- Amongst commercial organisations, it was widely commented that procurements are much preferred to grants and that UK Government should act as a lead customer more often. Commercial benefits of procurements include the ability to work with a lead-customer and the help it provides in de-risking investment.
- Nonetheless, the role for grant funding remains, as it is the mechanism for developing the technologies that underpin new products, services and government procurement programmes.
- DARPA is seen across several industries as being the gold standard for innovation. Accepting the fact that DARPA is defence orientated, DARPA is world leading and its outcomes have resulted in many genuine game-changing technologies including ARPANET which became the Internet. There was strong suggestion that UK should emulate its way of doing things if it is serious about stimulating innovation, including DARPA’s way of operating and running calls.

### The challenge of how to help Micro SMEs

- SMEs play an important role in innovation. Because cashflow can be challenging, calls which do not include an up-front payment deter participation from SMEs. ESA and many EC projects support up-front payment for this reason. A second issue is that in SMEs directors are very often paid through dividends. Terms and conditions that support an up-front payment and allow payment to non-PAYE directors for their time would remove the disincentive to SMEs to participate.

## Conclusions from Workshops:

The conclusions for NSIP are:

Criteria	Objective	Change Requested
Project duration and funding	To enable genuine innovation	Support multi-year developments with multi-year funding.
Competition scope	To avoid excluding valuable ideas	Make NSIP an open call (by topic).
Competition	To be more inclusive allowing support for all phases of innovation	Support market studies, feasibility studies, and product developments.

Criteria	Objective	Change Requested
Time to prepare a proposal	To allow a higher standard of proposals	Allow a minimum of 8 weeks for proposal development.
Advance timetable of future calls & scope	To allow organisations to allocate R&D funding in their annual budget setting cycle	Publish an advance timetable of calls before the start of the financial year together with the scope of each call.
Grant terms and conditions (including grant funding levels)	To avoid unnecessary risk of organisations' finance departments not approving proposal sign off, and to prevent NSIP being ignored in favour of either alternative.	Make grant terms the same as ESA or Innovate UK.
Feedback on proposals	To better inform organisations and help improve future proposals.	Provide feedback on all proposals
Proposal evaluation criteria	To maintain a high standard of innovation	No change required

# Summary of Proposed Changes to NSIP

Overall, the feedback from the survey was almost identical to that from the workshops. The workshops provided the opportunity for better elaboration of the key points and the opportunity for a wider discussion about how the UK can better stimulate innovation.

Based on the feedback received from the sector, this report suggests some changes to NSIP to help improve its effectiveness to stimulate innovation in the space sector. These are summarised below.

## Programme Design:

11. An NSIP strategic work programme is developed with a timetable published before the start of the financial year to enable large organisations to allocate their R&D budgets during their own financial planning cycle.
12. Funding opportunities that are open (by scope) to support a broader range of innovations.
13. The programme allows a variety of projects (feasibility studies, germinator projects and development projects) potentially with different grant funding levels, as may be appropriate, for each.
14. Adequate time is provided for responses to the funding opportunities (at least 8 weeks).
15. The programme enables projects to be run over multiple financial years to allow projects adequate time to deliver genuine innovation into the space sector.

## Pre-competition Activities:

16. Run sector briefings in advance of funding calls to provide a greater understanding and awareness of the call.
17. If appropriate, representatives of international collaborators or end-users of potential services are introduced by UK Space Agency to help the market success of the innovations being proposed.

## Competition Design:

18. A wider range of funding instruments is added beyond co-funded activities, for example fully funded competitive studies.
19. Funding levels, eligible costs and grant funding agreement terms and conditions including indemnity are reviewed.

## Competition Feedback:

20. Feedback is provided on all proposals.

Many of these are standard practice for competitions run by Innovate UK, ESA and Dstl and the UK Space Agency should, where possible, consider implementation of the above changes for future delivery of NSIP. Some of the suggestions may also have applicability to other UK Space Agency grant funding opportunities.

As the objective of NSIP is to stimulate innovation in the UK space sector, to help the sector create growth for the UK against global competition, exploring options to refine the delivery of NSIP are encouraged.

# Appendix 1 – Questions from On-line Questionnaire

## **Space Growth Partnership in conjunction with UKspace and UK Space Agency**

In 2020, the UK Space Agency launched the pilot National Space Innovation Programme (NSIP) and two funding opportunities were run:

- The NSIP-National opened on 22 July
- NSIP-International opened on 1 October

The Space Growth Partnership is working jointly with UKspace and the UK Space Agency to collect feedback on the pilot programme, to identify what worked well and any potential improvements that could be made for future NSIP funding calls.

We welcome your participation in this survey, from those who did and did not submit an application for NSIP funding. Organisations can submit more than one response.

### **Use of Your Data**

Any information that you provide will be collected by UK Space Agency and used by the Space Growth Partnership, UKspace and the UK Space Agency for the purpose outlined above and will not be shared with other organisations.

1. By ticking this box, you are accepting the use of your data and information provided in this questionnaire for the purpose above.  
I agree

### **About You and Your Organisation**

2. Your Name
3. Your email address
4. Your organisation name
5. Your Organisation Activity Area(s) (tick all that apply)
  - Space Manufacturing
  - Space Operations
  - Space Applications
  - Ancillary Services

- University or other research organisation

6. Your Organisation Size

	<10	<50	<250	>=250
Number of UK employees directly involved in space activities*				

\* as defined in the Size & Health of the Space Sector report

7. Where is your organisation headquartered?

- UK
- Europe
- North America
- Other (please specify): [free text]

8. If applicable, where in the UK are your organisation's main space-related activities?

Crown Dependencies	England - South East
England - East of England	England - West Midlands
England - East Midlands	Yorkshire & Humberside
England - North East	Northern Ireland
England - North West	Scotland
England - London	Wales
England - South West	

**About your participation in the NSIP pilot programme**

9. Did you submit an application – whether as a project lead or within a consortium - into the NSIP-National call that opened on 22 July?
10. Did you submit an application – whether as a project lead or within a consortium - into the NSIP-International call that opened on 1 October?
11. If you did not apply to either of the NSIP funding calls, were any of the following factors in your decision to not participate?  
[tick all that apply]
- a. Unaware of the opportunity
  - b. Project idea insufficiently mature
  - c. Project idea did not match NSIP funding call themes
  - d. Project idea didn't align with NSIP-International target countries of interest
  - e. Covid-19 impacted bidding resource
  - f. Unable to assemble a consortium / project team
  - g. Not enough notice to develop and submit the proposal
  - h. Minimum grant funding threshold was too high

- i. Maximum grant funding too low
- j. Organisation unable to provide match-funding/resourcing
- k. UKSA Grant Funding Agreement terms not acceptable
- l. Timeline too short to spend the grant funding
- m. Single year NSIP funding was not attractive
- n. Other: *[insert free text box]*

12. Which were the three most important factors that influenced your decision to not apply?

- a. Unaware of the opportunity
- b. Project idea insufficiently mature
- c. Project idea did not match NSIP funding call themes
- d. Project idea didn't align with NSIP-International target countries of interest
- e. Covid-19 impacted bidding resource
- f. Unable to assemble a consortium / project team
- g. Not enough notice to develop and submit the proposal
- h. Minimum grant funding threshold was too high
- i. Maximum grant funding too low
- j. Organisation unable to provide match-funding/resourcing
- k. UKSA Grant Funding Agreement terms not acceptable
- l. Timeline too short to spend the grant funding
- m. Single year NSIP funding was not attractive
- n. Other: *[insert free text box]*

13. Overall, how satisfied were you with the NSIP funding call process on a scale of 1 to 4 (where 1=very unsatisfied, 2 = unsatisfied, 3 = satisfied, 4=very satisfied)  
Please explain the reasons for your score in the box below:

### **Application Process**

14. If you did submit an application, thinking about the application process itself, what worked well? (where 1=very unsatisfied, 2 = unsatisfied, 3 = satisfied, 4=very satisfied)

- Min and max grant funding available
- Match funding requirements
- The clarity of the funding call guidance -
- The ease of use of the application form and templates -
- Structure of the application form –
- Publication of FAQs –
- Time allowed to prepare a proposal
- Grant Terms & Conditions –
- Proposal evaluation criteria –
- Feedback on proposals -



- Duration to deliver the project
  - Other [free text box?]
15. Were there any specific aspects of the funding call process that you feel could be improved? (Please provide a rating for each of the application processes below: where 1=very unsatisfied, 2 = unsatisfied, 3 = satisfied, 4=very satisfied)
- a. Promotion of the NSIP funding opportunities
  - b. NSIP funding call themes
  - c. Timescales to submit a project application
  - d. Lower minimum grant funding threshold
  - e. Higher maximum grant funding threshold
  - f. UKSA Grant Funding Agreement terms
  - g. Proposal evaluation criteria
  - h. Feedback on unsuccessful application
  - i. Other [insert free text box]
16. How important are the following to you when considering whether or not you will submit an application to a future NSIP funding opportunity? (where 1=very unsatisfied, 2 = unsatisfied, 3 = satisfied, 4=very satisfied)
- Advance timetable of future calls, including scope/themes –
  - Pre-information sessions / consortium-building opportunities –
  - Expression of Interest stage to validate project idea
  - Timescales available to prepare your application(s) -
  - Greater flexibility in grant funding levels
  - Clarity on match-funding requirements
  - Clarity on NSIP-International priority countries
  - Clarity of the funding call guidance -
  - The ease of use of the application form and templates -
  - Structure of the application form –
  - On-line application -
  - FAQs -
  - UKSA Grant Terms & Conditions –
  - Proposal evaluation criteria –
  - Feedback on proposals -
  - Duration to deliver the project –
  - Clarity about further NSIP funding opportunities –

### **Potential Themes For Future NSIP Funding Calls**

17. Looking at potential thematic areas under future NSIP calls, which of the following are of most interest to you?

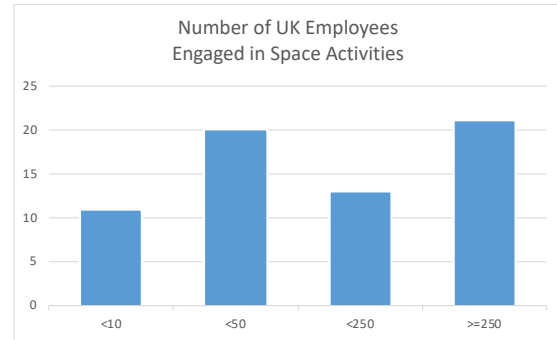
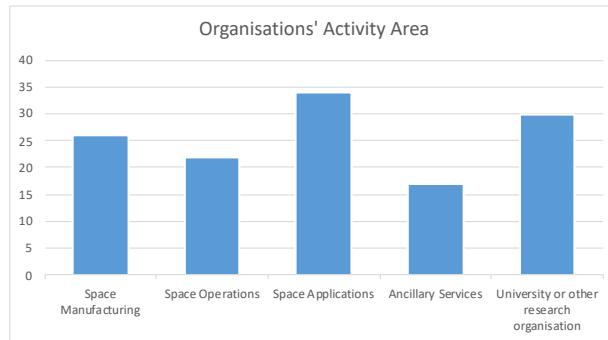
- Earth observation
- Climate change net zero challenge
- Satellite telecoms
- Resilient positioning, navigation and timing
- Space Situational Awareness, space traffic management
- Low-cost access to space
- In-orbit economy: assembly, servicing and debris removal
- Space propulsion
- Other [add free text box]

18. If there is any other information that you would like to share with UKSA concerning the pilot NSIP, please use the text box below

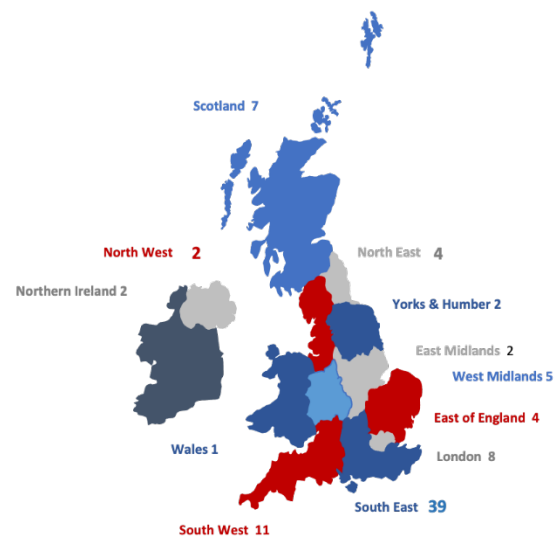
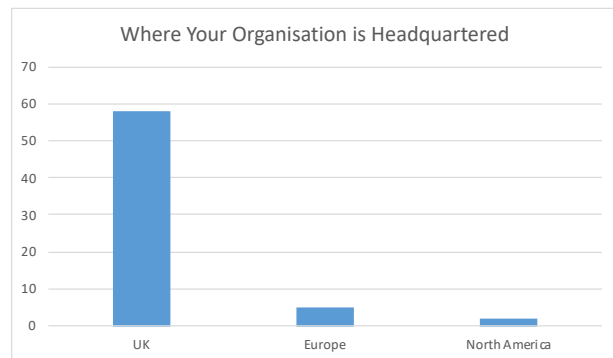
# Appendix 2 – Results from On-line Questionnaire

## About Organisations Who Responded

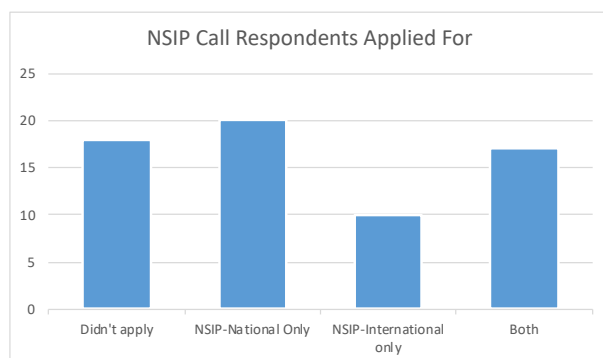
### Activity Area and Size of Organisation



### Where Organisations are Located

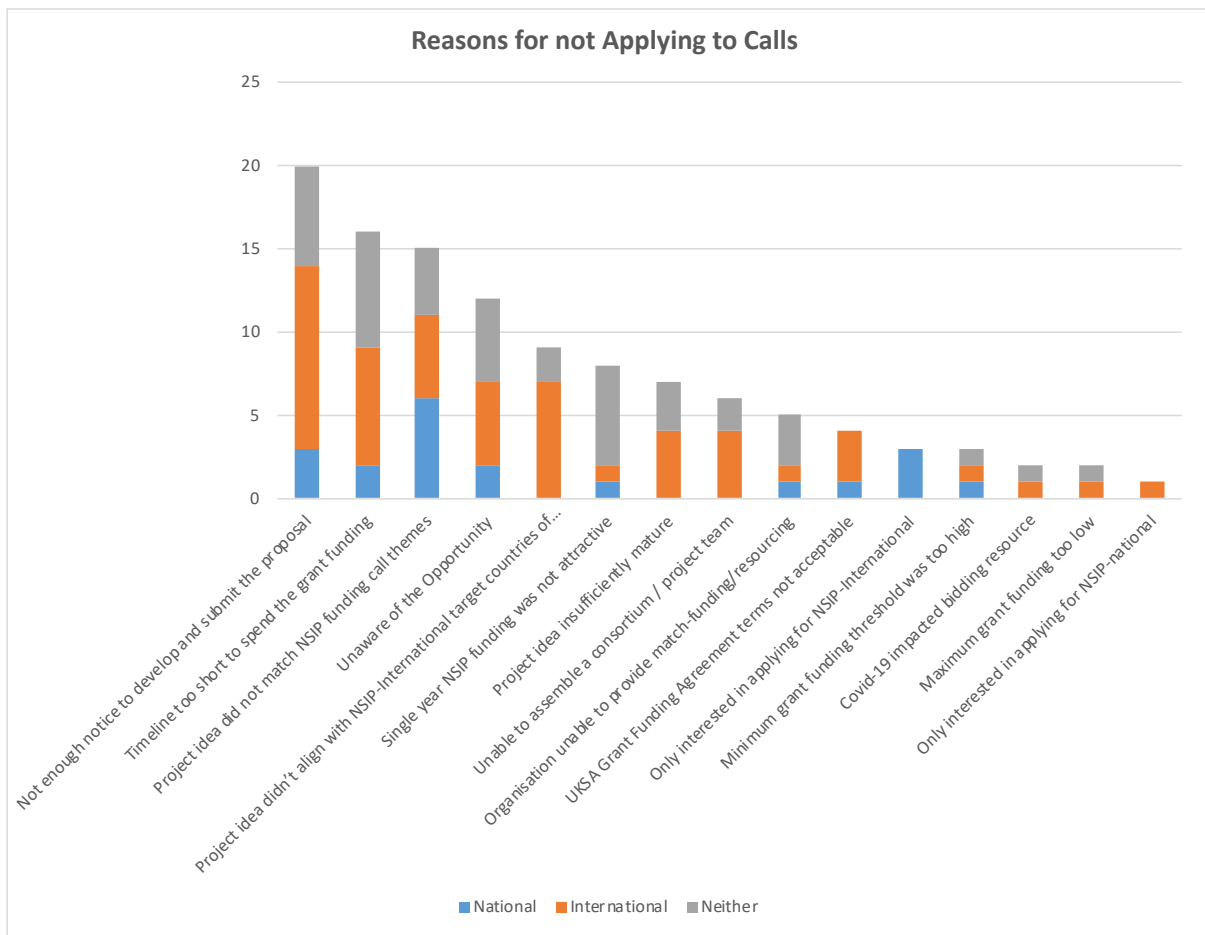


### Which Calls Respondents Applied For

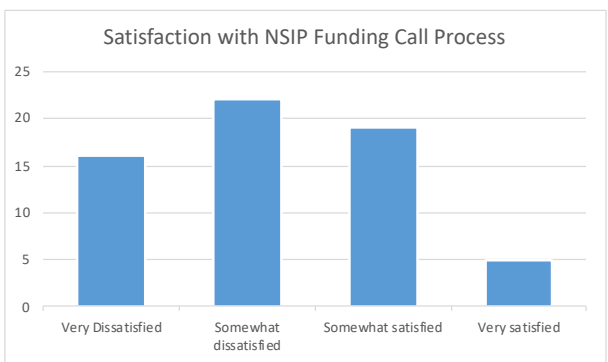


## About Participation in the Programme

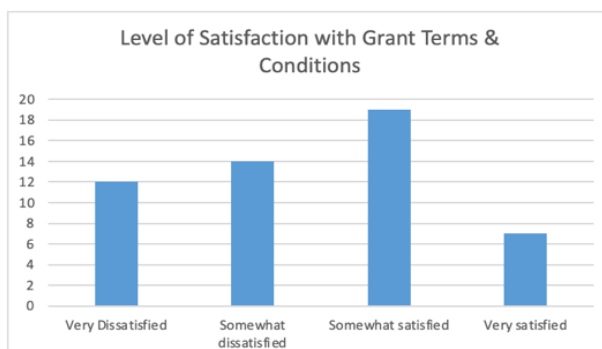
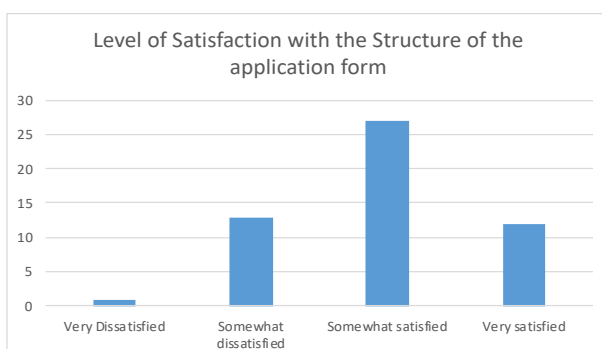
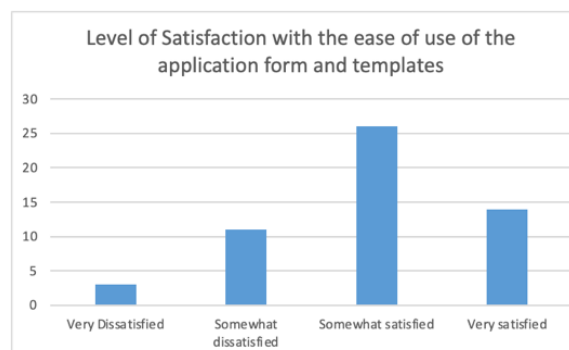
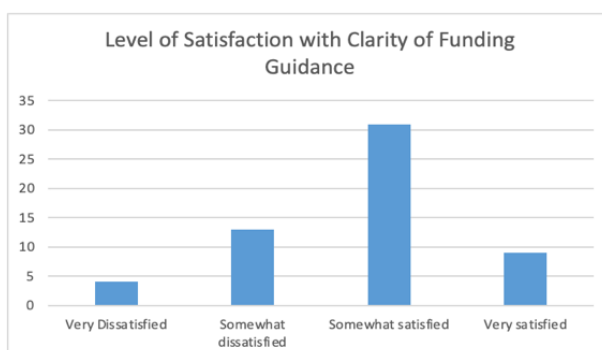
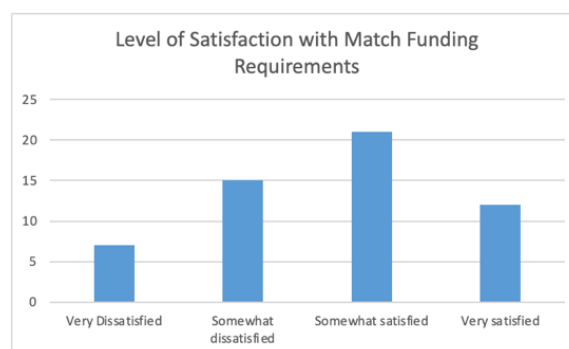
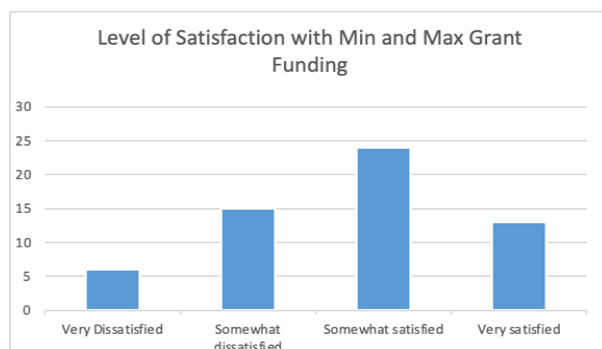
Influencing Factors in deciding not to apply for the National call, the International call or to neither call:

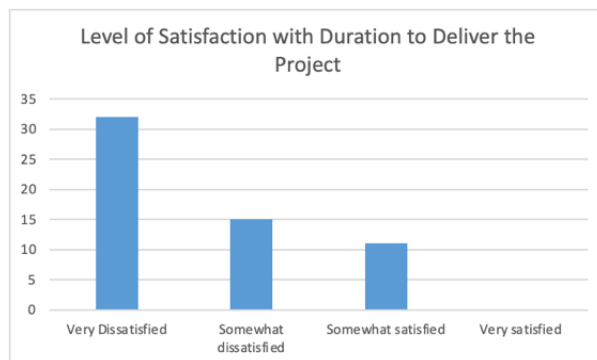
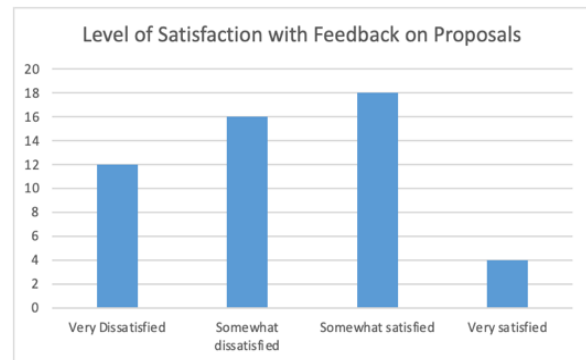
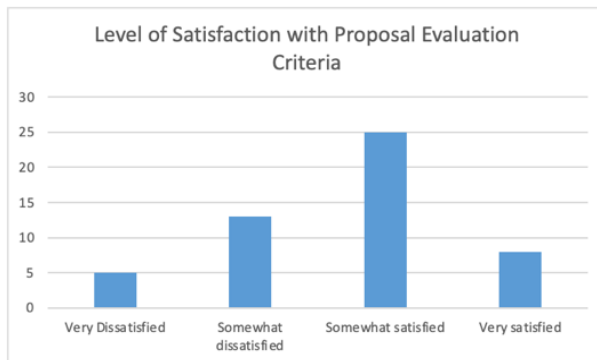


## Overall Satisfaction with NSIP Funding Call

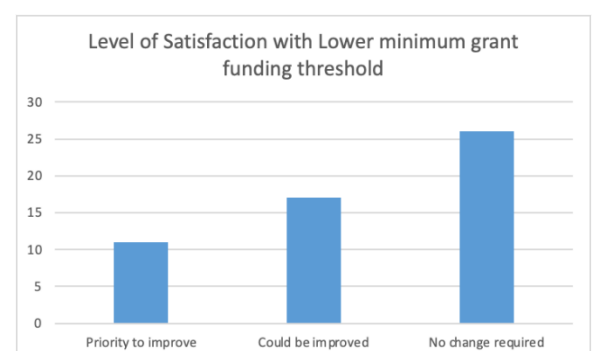
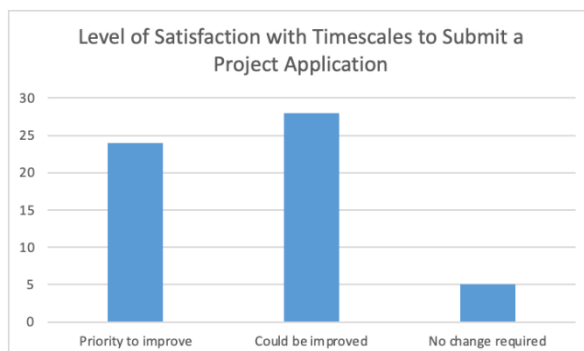
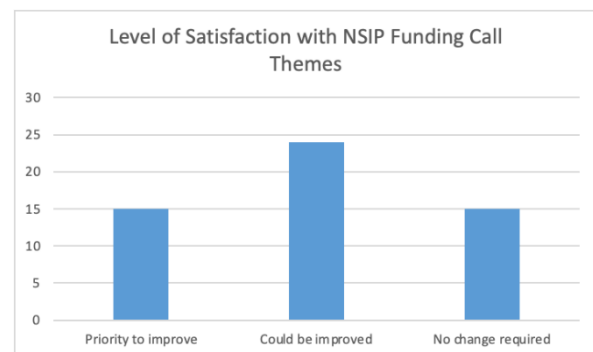
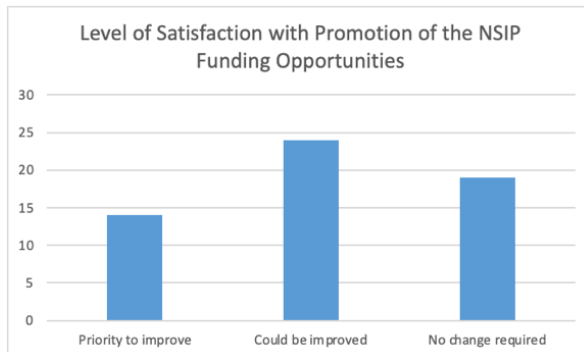


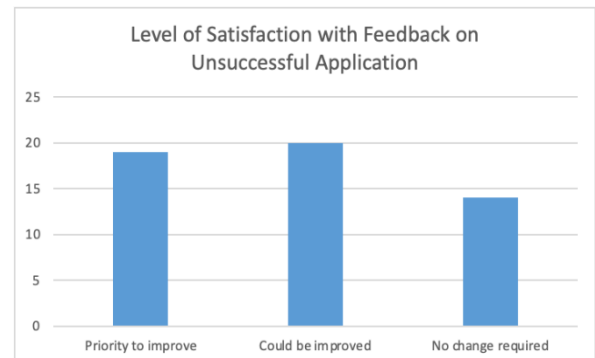
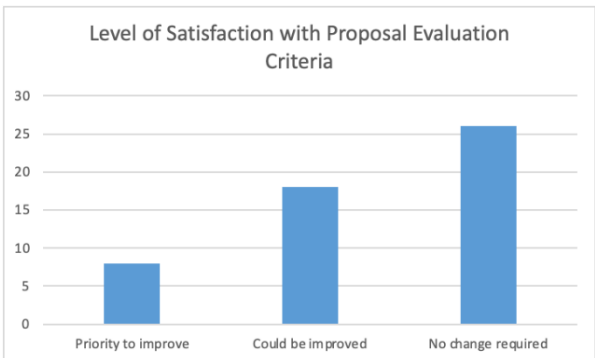
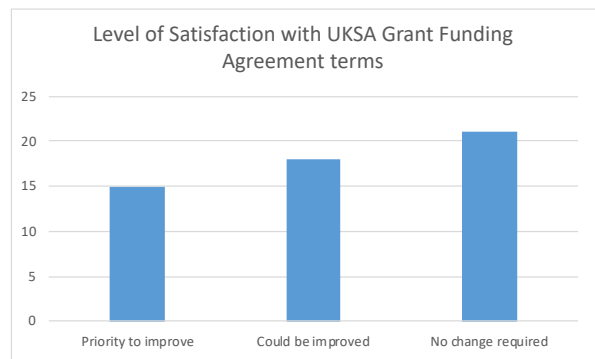
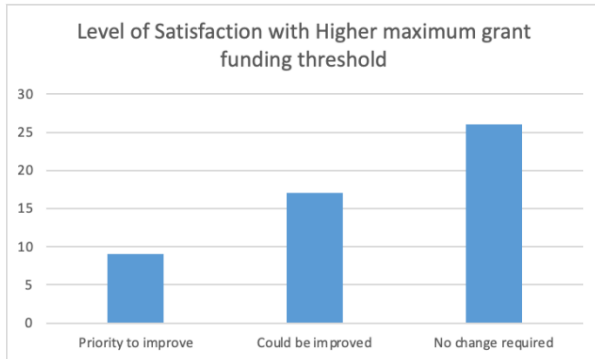
## Application Process – What Worked Well?



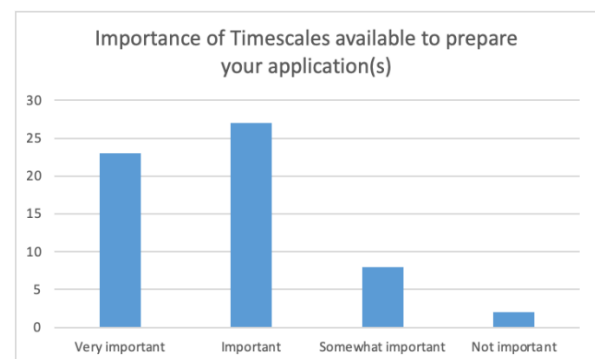
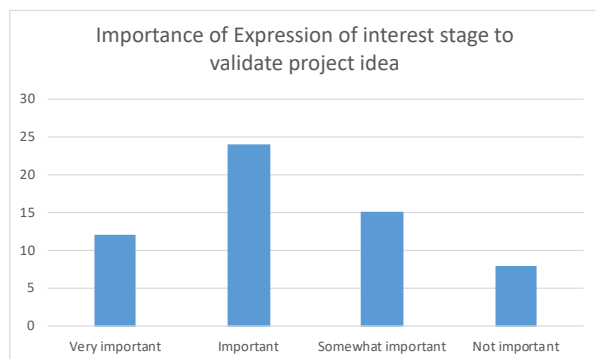
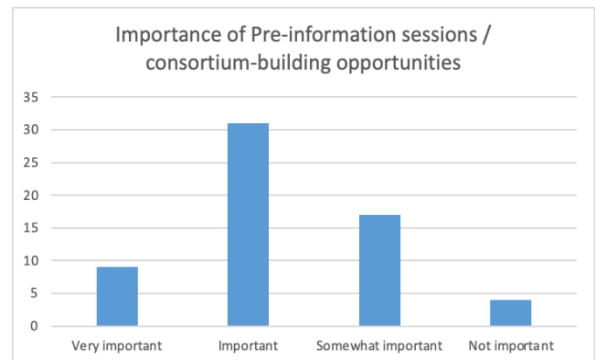
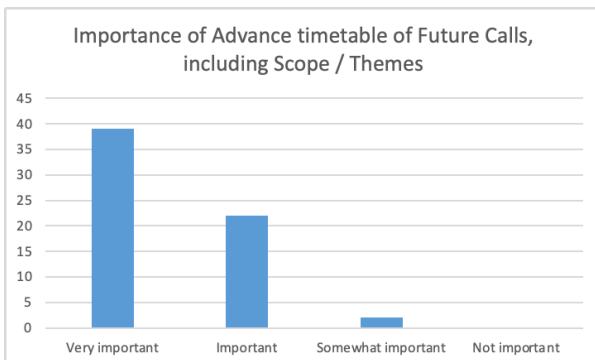


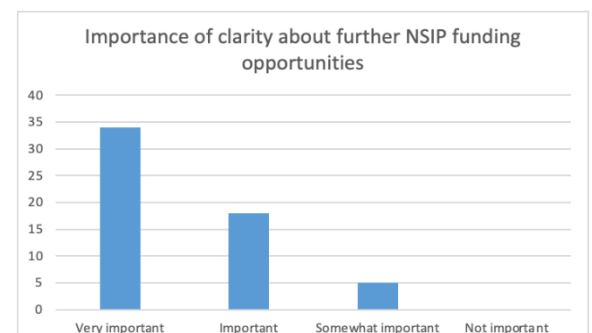
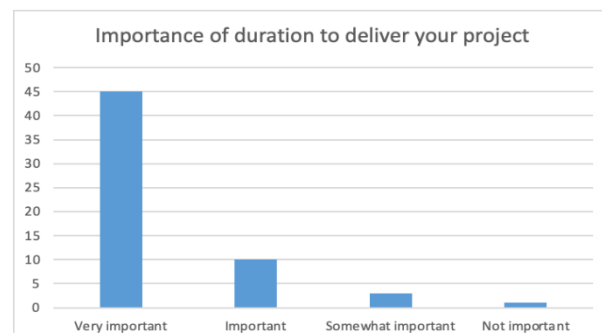
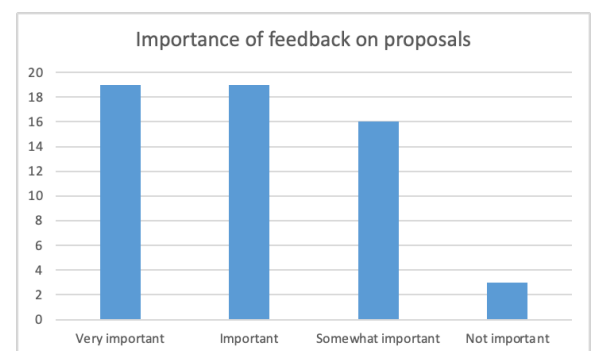
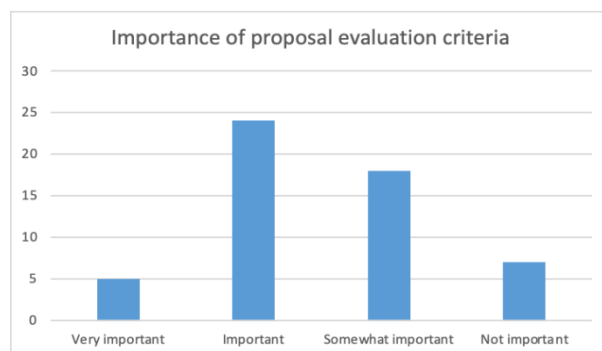
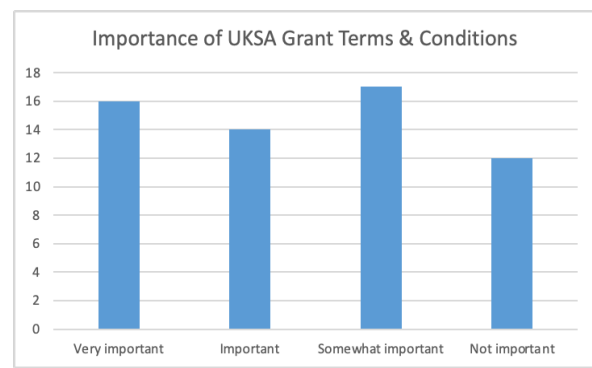
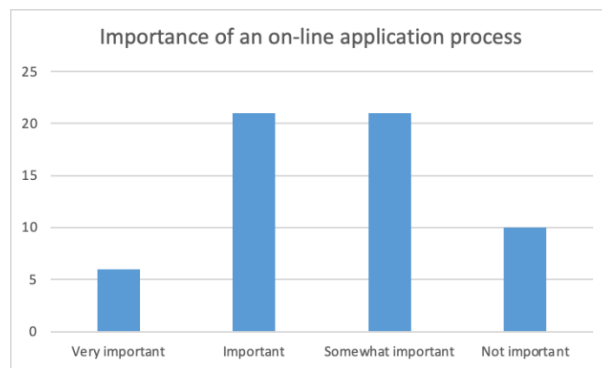
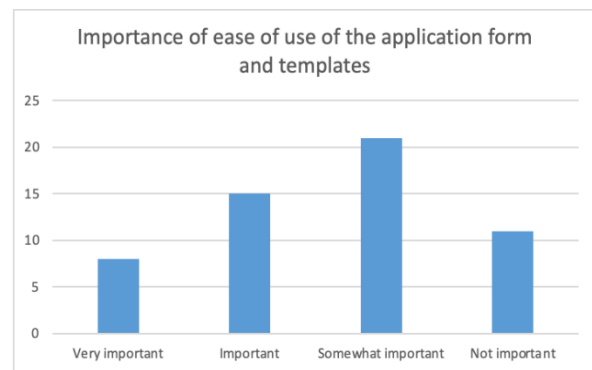
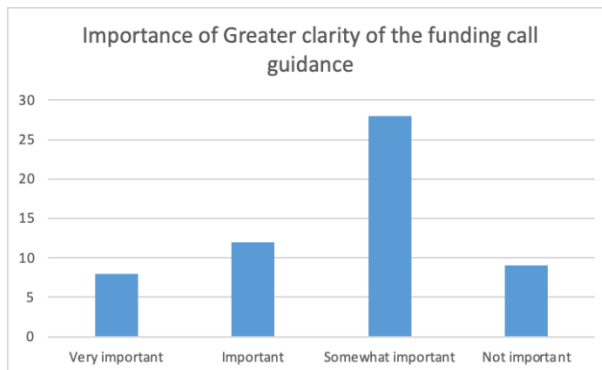
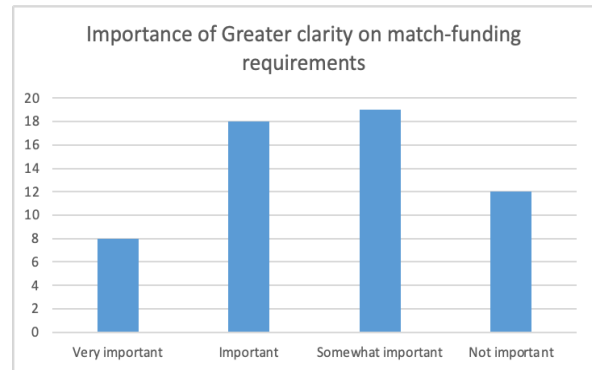
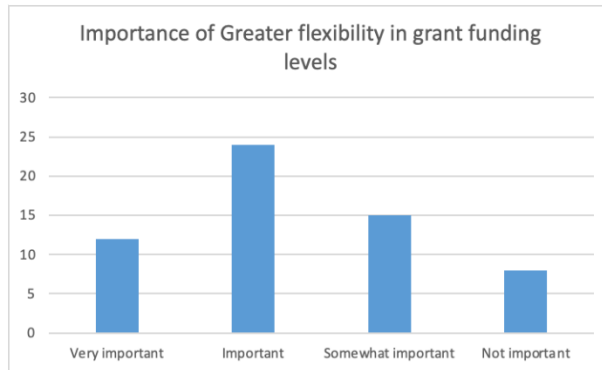
## Any Specific Aspects That Could be Improved?





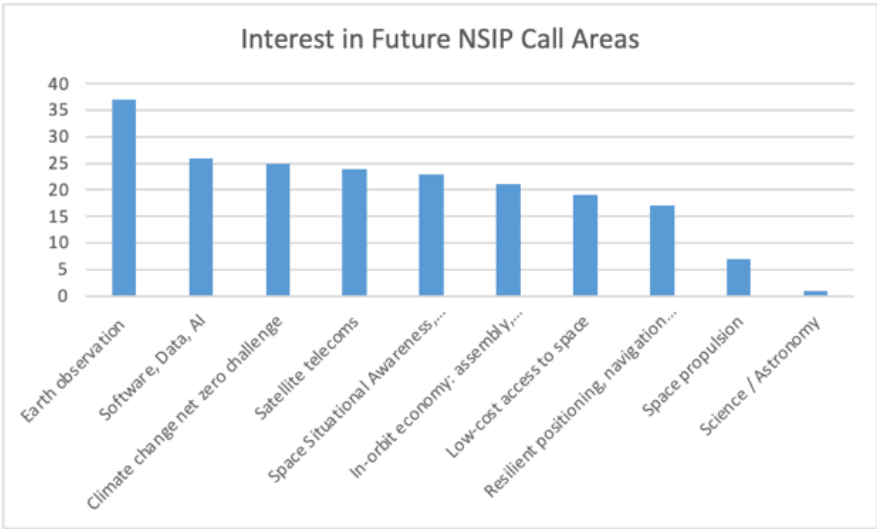
## Importance of Specific Features in a Future NSIP Call







Interest in Future Topics for an NSIP Call



## Appendix 3 – Feedback from Workshops

### Academic Workshop

#### Feedback on the NSIP

- There was a strong consensus that the project duration of 6 months (for the national programme) and as little as 2 months (for the international programme) was not enough time.
- The timescale for project implementation and the requirement to spend the money before the end of the financial year ruled out many good projects and constrained the scope and ambition of the remaining projects that could be proposed.
- The need to be able to support longer term projects with multi-year funding was seen as essential.
- The societal challenges were seen as an unnecessary hoop to have to jump through and suggested be removed. Societal topics should only ever be optional.

#### How Can the UK Facilitate Greater Innovation?

- There was a strong view that Innovation is where you find it. Waiting for a funding call that fits your idea means you could wait forever, and the innovation would be lost to the UK. Consequently, organisations need to be able to propose any project (by topic). This means that an open call is essential.
- To do genuine innovation, organisations need the ability to run longer term projects and to solve problems methodologically. Projects need to be run and funded over several years. Academic organisations would be happy to have proper project oversight and produce detailed project reports. Projects could be funded in phases and competitions could be structured so that the project only progresses if it meets specific success criteria at each gate.
- The Dstl Defence and Security Accelerator competition was pointed out as a good example of a successful project framework which supports multi-year multi-stage funding for innovation and addresses these issues well.

#### Is an International Call Needed?

- The international call was seen as helping the UK to establish contacts post-BREXIT but could also help widen the mindset outside of national thinking.

#### If the Issues Were Addressed

- If the issues were addressed, at least 1 of the 3 academic organisations in the workshop would have applied. As it was, they regarded it as too dangerous to attempt to meet unrealistic timescales.

## **Large Enterprise Workshop**

### **Feedback on the NSIP Pilot**

- There was widespread support for a national programme.
- However, the low funding rate and poor grant terms in the NSIP pilot compared to ESA and Innovate UK meant that large companies found it unattractive. Also unlimited liability was unacceptable to at least one large company.
- It was widely agreed that there wasn't enough time allowed to do a serious project and that NSIP needed multi-year funding.
- Consequently, organisations took their projects to ESA or self-funded them because it was preferable.
- Advance notice of the competition (before the start of financial year) is important to large companies, where R&D budgets are often allocated at the start of the financial year, so an annual calendar of calls needs to be published.
- There was further comment that no feedback was received on at least one unsuccessful proposal and that good feedback is key to improving proposal quality.
- There was concern that the UK Space Agency needs to announce any new NSIP call early in the financial year 2021/22 so as not to repeat the same issues.
- There was strong view that in future the UK Space Agency should use Innovate UK as the delivery mechanism to run future NSIP calls. Innovate UK is seen as having acceptable grant terms & conditions, supports multi-year projects, has a well understood on-line process, has good assessment, and provides feedback. UK Space Agency could still set the scope of the competition.

### **How Can the UK Facilitate Greater Innovation?**

- There was a consensus that procurement is better than grants to stimulate innovation. It de-risks investment by providing an anchor customer. It also meets a customer need which helps to generate more sales.
- However, there is a role for grant funding. It provides the mechanism for developing the technologies that underpin new products, services and government procurements.
- Feedback was that a national funding programme needs:
  - A defined funding programme with forward schedules
  - Predictable calls
  - Multi-year funding for projects
  - Larger budgets
- It was observed that UK Government funding could never be transferred from ESA to a national programme because ESA and NSIP funding are set at completely different times through completely different processes and there is no guarantee funding would be carried from one to the other.

### **Is an International Call Needed?**

- There was a view that a separate international call isn't needed and it should be included in the scope of the national call.
- If there is an international call, the UK Space Agency need to introduce potential partners from abroad in line with its objectives for the call.

### **If the Issues Were Addressed**

- If the issues were addressed, the companies would have submitted more and bigger proposals – one company between 3x and 4x the value of the proposals submitted.

## **SME Enterprise Workshop**

### **Feedback on the NSIP Pilot**

- There was again strong support for a national programme.
- Comments were made that the NSIP pilot call wasn't suited to SMEs because there was no up-front project kick-off payment [unlike ESA] so project cashflow was a huge problem for SMEs, deterring them from participating.
- There was criticism of the 20% overhead allocation rate wasn't acceptable.
- The timescales were noted as being unrealistic for innovation.
- A wider issue was identified in that in micro-SMEs, company Directors are very often exclusively paid through dividends and there is no PAYE. This is normal due to the uncertainty of cashflow but an issue for SMEs across a number of funding calls including H2020. To stimulate innovation, solutions should be sought which make funding schemes more applicable.
- There was strong view that NSIP needs to include a mix of tools – like ESA - with different grant rates. Market studies need to be included in NSIP.
- There was comment that the UK Space Agency should have argued for better funding terms [with BEIS/treasury] for the competition.
- There was a strong view that Innovate UK application process and terms & conditions would have been much better and that NSIP should have been handed to Innovate UK to run.
- UK Space Agency was urged to declare now whether there is a follow on NSIP competition this year and some concern was expressed that NSIP competition will not allow sufficient time for projects again.
- There was another comment about the lack of feedback on proposals.

### **How Can the UK Facilitate Greater Innovation?**

- Procurements are much better than grants and that government needs to procure more. It also de-risks company investment.
- The US Defence Advanced Research Project Agency (DARPA) is the gold standard for innovation. The Space Agency should seek to emulate DARPA and its way of running competitions.

- Support micro-SMEs by supporting payment to directors who may only be paid through dividends.

#### **Is an International Call Needed?**

- There was another view that if there is an international call, the UK Space Agency need to introduce potential partners from abroad.

#### **If the Issues Were Addressed**

- If the issues were addressed, the number, quality and scope of proposals would have been considerably higher.