Introduction

The Higher Education Partnerships in Sub-Saharan Africa (HEP SSA) Programme – supported by the Anglo American Group Foundation and the UK Government through the Global Challenges Research Fund (GCRF) – was established by the Royal Academy of Engineering following the successful pilot scheme, Enriching Engineering Education Programme to help address the engineering skills shortage in sub-Saharan Africa and to showcase engineering’s role in driving economic development in the region.

By forming and strengthening relationships between academia and industry, the programme aims to enable the higher education system in sub-Saharan Africa to produces engineers with the skills and knowledge required to meet the needs of industry and to tackle local challenges.

To maximise the impact of this collaboration, the programme is implemented through a ‘hub and spoke’ model. The Hub universities are funded to undertake bilateral secondments with local industry partners, and in turn, share their
experiences with a larger number of Spoke universities through a series of knowledge sharing workshops and reports.

In the pilot phase of this programme, which ran between 2013 and 2015, the two Hub universities were the University of Zimbabwe (Southern Africa) and the University of Dar es Salaam in Tanzania (East Africa), supporting ten Spoke universities across a further five countries in sub-Saharan Africa within the programme.

Following a full evaluation in 2016/17, the programme was scaled up and rebranded as the Higher Education Partnerships in sub-Saharan Africa (HEP SSA) programme. Two new calls for funding were opened in 2016, and 2017, respectively, and the following Hubs were selected:

**2016**
- The University of Botswana
- Moi University, Kenya
- The University of Dar es Salaam, Tanzania
- Makerere University, Uganda
- The National University of Science and Technology, Zimbabwe

**2017**
- The University of Malawi, The Polytechnic
- The University of Zambia
- The University of Port Harcourt, Nigeria
- The University of Namibia

The Royal Academy of Engineering is delighted to launch a new call for additional hub institutions in sub-Saharan Africa from June 2018. Academic Institutions are invited to bid to receive two years of grant funding totalling up to GBP £140,000. This will be expended in four equal payments. Applicants are expected to incorporate a UK partner as part of their application, as well as partners from local industry and Spoke (local/regional university) institutions.

**Please note, for any applicant that does not have a UK partner, the Royal Academy of Engineering will be able to facilitate this connection.**
Eligibility criteria

- The suggested project should clearly align with the overall aims and objectives of the scheme; however, original ideas and local solutions are actively encouraged.
- Project activities must include a budget of up to £140,000 delivered over a maximum of two years.
- Project activities must run between November 2018 and November 2020.
- Applicants must not be currently receiving funding from the Royal Academy of Engineering through the Higher Education Partnerships in sub-Saharan Africa Programme*.
- The university must propose a means of collaboration with at least one partner based in the UK. A partner may also be considered as the UK institution if it is headquartered in the UK.
- The lead applicant will be a university in sub-Saharan Africa**, excluding South Africa*** and must propose a means of collaboration with at least one industry partner, one UK institution (academic or industry) and at least three Spoke universities nationally or regionally.

* This refers to the four universities that are still receiving funding until 2019: The University of Malawi, The University of Zambia, The University of Port Harcourt and The University of Namibia.

**For the purposes of the programme, the Academy considers the following 49 countries to be part of sub-Saharan Africa:


*** For South African universities, a separate RAEng programme, Industry-Academia Partnership Programme is available. Universities in South Africa are welcome to partner as Spoke partners.
Programme objectives

This programme aims to bring engineering curricula in universities in line with current industrial practice, and to improve teaching practices and research output in engineering, through a structured partnership between universities and industry.

Programme expectations

- The successful applicant will forge partnerships with local industry, universities within their country and/or region.
- The successful applicant will forge/develop a formal partnership with a UK partner including a formalised joint plan of activities/project plan.
- Teaching staff (professors/technicians etc.) will undertake secondments – ideally over the summer teaching break – to local industry settings, and their cost of living and any replacement staff costs will be covered by the programme grant.
- Local industrialists will undertake secondments into the university setting to advise on curricular, mentor students, teach classes etc.
- At least one workshop per year will be hosted on a rotational basis throughout the Spoke network of universities discussing the lessons learned and potential actions to be taken, including a written report to be shared with all project stakeholders on the workshop.
- Students will be encouraged to participate in the programme through workshops and exposure to industrial seeondees. Additional student activities and engagement in the programme are welcomed.
- The Hub institution will provide regular reports on the programme’s development to the Academy, and issue invitations to Academy representatives to attend the workshops.
- The cost of living and any replacement staff costs will be covered by the programme grant, in addition to hosting and travel to dissemination workshops.
- In addition to bilateral secondments and dissemination workshops throughout the Spoke network, applicants are invited to consider other activities which will meet the programme objectives to bring engineering curricula in line with current industrial practice, and to improve teaching practices and research output in engineering, through partnerships between universities and industry.
- The successful applicant is expected to have outlined a plan for sustainability of this project post funding, including the continuation of partnerships forged/developed for the purpose of this funding.

Submission deadline

The deadline for applications is 9am (UK time) on Thursday 27 September 2018. Any incomplete applications, or applications received after this date, will not be considered.
Monitoring and evaluation

The Academy has a requirement of close communication, should your application be successful. Awardees will be required to report on progress to the Academy every six months, to detail completed activities and future plans. The payment schedule for the grant will be contingent on these reports being received.

Awardees agree to provide a follow-up report, 12 months after the completion of the project, to demonstrate the longer term impact of the secondments.

In addition, applicants are expected to include in their budget and activities, an independent evaluation of the project at the end of the two-year project.

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<thead>
<tr>
<th>Payment/Reporting schedule</th>
<th>Report due</th>
<th>Payment due from RAEng</th>
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</thead>
<tbody>
<tr>
<td>November 2018</td>
<td>Initiation report</td>
<td>Up to £35,000</td>
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<tr>
<td>May 2019</td>
<td>Progress report</td>
<td>Up to £35,000</td>
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<tr>
<td>November 2019</td>
<td>Progress report</td>
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<tr>
<td>May 2020</td>
<td>Progress report</td>
<td>Up to £35,000</td>
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<tr>
<td>November 2020</td>
<td>Final report</td>
<td>No</td>
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<tr>
<td>November 2021</td>
<td>Follow-up report</td>
<td>No</td>
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Contact details

If you have any questions at all, please don’t hesitate to contact:

Sebastian Scott  
Programme Manager, GCRF  
Royal Academy of Engineering  
Sebastian.Scott@raeng.org.uk  
+44 (0) 20 7766 0616

How to apply

All applications must be submitted via the Academy’s online application system (https://grants.raeng.org.uk). The applicant must first register with the system and provide some basic log-in details to create a profile. All personal details submitted to the Royal Academy of Engineering will not be shared with a third party unless expressed permission has been granted in accordance with GDPR rules.

Please ensure the contact email address is correct and will be valid for the entirety of the application process as this will be the main method of communication regarding the outcome of the application.

The application form has seven sections and should take approximately two hours to complete, assuming you have answered the questions offline and merely
need to enter the information, rather than compose it. The guidance notes below are more detailed so we recommend you keep this document to hand.

The primary purpose of this application form is to identify whether the applicant has a project plan suitable to the aims of the scheme. You will have the option to download a pdf of your application after submission, which may be useful for future reference.

Please note that we do request a letter of support from your UK partner and Vice Chancellor.

If you have any questions concerning the application or the online application system, please contact Sebastian Scott.

Diversity and Inclusion

The Royal Academy of Engineering is bound by the Equality Act 2010, and as such, committed to diversity, welcoming applications from women and other groups who are currently under represented.

In the application, there are optional questions referring to the applicant’s diversity. This will not be shared with any third party, nor will it affect your application. All applications are awarded on merit.

These questions are for internal use, will be anonymised, and will contribute to measure the Academy’s Diversity and Inclusion progress.

If you have any questions, or concerns, please contact Sebastian Scott.

Completing the application form

After logging in to the online system and selecting the scheme titled ‘Higher Education Partnerships in sub-Saharan Africa 18/20’ you should be presented with the ‘Instructions’ screen. Here you will see some general instructions on how to use the system as well as the following list of the seven sections of the application form:

1. Applicant, institution and partnership details
2. Project details
3. Project objectives, outcomes and impact
4. Project planning and resourcing
5. Letters of support and declaration
6. Additional Questions (for previous hubs only)*
7. Marketing
* To be completed by previously funded hubs through HEP SSA only.

At any stage in the application process you can save your progress and return to the application at a later date. You can answer the questions in any order you like so it is possible to skip some sections and return later. It is therefore advised to view the application early on for an indication of what is required, and ensure that you have all the necessary documentation at hand when you start completing the application.

**Please note:** Only one application will be accepted per institution.

1. Applicant, institution and partnership details

This section is to provide more details on the lead applicant, and outline the choice, type of partnership including any MOUs or agreements, and role of the spoke, industry and UK partners. Please provide the name and contact details of both (or all) the individuals and their institutions who will be involved in this project. Please ensure the contact email address is correct and will be valid for the entirety of the application process as this will be the main method of communication regarding the outcome of the application. If you do update any of your details please also update them in the "My Information" tab.

**1.1 Lead applicant (Hub University main contact) contact details:**
These are the details we will use to contact the lead applicant. The lead applicant must be a representative from a university in sub-Saharan Africa. Please include your name, job title, institution and email in the address line.

**1.2 Please provide contact details of the co-applicants:**
Please enter the names, position, organisation and email address for every applicant involved in this proposal including the main contact for each spoke university partner, industry partners and the UK partner(s).

**1.3 Please upload the CVs of the lead applicant and the UK partner:**
CVs should be a maximum of four pages long. There is no set format for the CV but it should include information on posts held in at least the last five years together with information on education and qualifications obtained (with dates), evidence of eminence and seniority (for example: details of awards and prizes won, invited lectures, national/international committee membership/leadership) and saved as a PDF. **CVs longer than four pages will not be accepted.**

**1.4 Collaborating partners details:**
Please upload a document with a narrative summary detailing the lead (hub) university, and all partnering institutions. **You have up to 500 words to answer this question.**
The details should include:

- The number of years the institution has been in existence
- Engineering courses offered
- Number of students and staff
• Indicators of track record (ranking, awards, etc)
• Link to website for engineering faculty

For spoke university partners:
• Main contact’s name, position and email address
• Level of partnership (i.e. MOU, legal agreement or equivalent?)
• The number of years the institution has been in existence
• Engineering courses offered
• Number of students and staff
• Indicators of track record (ranking, awards, etc)
• Link to website for engineering faculty

For industry partners:
• Main contact’s name, position and email address
• Level of partnership (i.e. MOU, legal agreement or equivalent?)
• Nature of business and type of products/services offered
• Indicator of size (e.g. #employees, turnover, etc)
• Nature of R&D (if any occurs)

For UK partner(s):
• Main contact’s name, position and email address
• Level of partnership (i.e. MOU, legal agreement or equivalent?)
• Name of department, institution
• Indicators of track record (ranking, awards, etc)
• Link to website for engineering faculty

1.5 Please mention whether, to your knowledge, any partner listed is participating in more than one application:
Please include any current application that you are aware of. Whilst a HEP SSA Hub university can only apply for funding once their current funding ends, a Spoke, UK and Industry can partner on multiple applications. You have up to 200 words to answer this question

1.6 Role, contribution and benefits of industry partner(s):
Provide justification for the choice of industry partner including the strategic importance of this relationship to you and your institution. Please specify the exact role of the industry partner(s) in the project. Provide details of what has been achieved so far through any existing collaboration and what is the overall perceived long-term vision of this relationship. Please write up to 200 words per industry partner.

1.7 Role, contribution and benefits of UK partner(s):
Provide justification for the choice of UK partner(s) including the strategic importance of this relationship to you and your institution. Specify the exact role of the UK partner in this project. Provide details of what has been achieved so far through any existing collaboration and what is the overall perceived long-term vision for this relationship along with expected benefits to the UK partner. You have up to 400 words to answer this question.

1.8 Role, contribution and benefits of the spoke university partner(s):
Provide justification for the choice of spoke university partners. Specify the role and benefits of the spoke partners in this project, and provide information on any MOUs or agreements signed. You have up to 200 words per spoke university partner.
2. Project details

This section is to provide details on the project name, abstract and an opportunity to explain why the lead applicant’s institution would be suitable as a ‘hub’.

2.1 Project details
Please provide a title for the project to be referred to as for the duration of the project. **You have up to 30 words to answer this question**

2.2 Please provide a short abstract/ summary of the proposed project:
This is a short-outlined summary of your proposed project. The project summary should provide a brief overview of your aims, the programme of activities and the benefits of the activities to be undertaken during the project. You will have further opportunity in subsequent questions to go into more detail, this is a simply an overview of the proposed two years of activities. **You have up to 300 words to answer this question.**

2.3 Total funding sought:
This should state the exact amount of funding contribution sought from the Royal Academy of Engineering.  **(Please note: The maximum available funding is £140,000)**

2.4 Keywords
Please provide up to 4 key words relating to this project. For example, Education, Gender Equality, Mechanical, Civil; for the purpose of categorisation and review. **You have up to 4 words to answer this question**

2.5 Suitability as hub university:
Please explain why your institution is a suitable candidate to be a hub university, and, how you would ensure that it gained maximum benefit from the programme? Please consider any other, related programmes the university is involved in – across any department, the strategic vision of the university, and how you will engage/ involve the local and UK partners within this project with the end goal of maximum knowledge dissemination and collaboration. **You have up to 500 words to answer this question**
3. Project objectives, outcomes and impact

In this section, please indicate the main objectives the expected outcomes, including how you intend to maximise the benefits gained from the project, the methods that you will implement to monitor the project and mitigate any risks in the project.

3.1 Project objectives:
Please state up to 5 objectives for the project. This will be the main measurable objectives for the success of the project, and will be used to measure the progress of the project, and impact in the conclusion of the project. Please be clear, concise and realistic in your expected objectives. For example, Objective 1: Completing 10 Academic Secondments to Industry. You have up to 250 words to answer this question.

Objectives definition:
Something that you plan to do or achieve. What does your project produce? For example, number of students taught by an industrial secondee, a change in curriculum, a certain number of staff trained on certain technical equipment, or number of secondments completed.

3.2 What are the expected outcomes of the project for your department, university and wider community in your country?
The Academy wishes to use this funding as a catalyst to build lasting engineering capacity and create industry ready graduates. As such, please outline the expected outcomes of this project that will benefit your institution and plans for activities you will undertake to maximise the benefits of the programme for the wider engineering community and community. These outcomes may include improved faculty teaching, increased student internships, Industry sponsorship, etc. You have up to 500 words to answer this question.

Outcomes definition:
An outcome is a change that occurred because of your project. For example, employment of graduates, an improved curriculum leading to an increase in skills of students, or an increase in skills of staff.

3.3 Key Impact/ Indicators of project success?
What metrics for success/ wider impact would you consider suitable for this project? Please note up to five specific indicators and targets for success you hope to achieve with the project to demonstrate success. This would include longer term institutional impacts such as percentage of students employed in 5 years, etc. You have up to 300 words to answer this question.

Impact definition:
Impacts are the long-term effects of your activities. They are what you hope your efforts will accomplish. For example, it may be increased local industry production, increased university ranking, increased native engineers undertaking national engineering projects/ reduced reliability on foreign engineering consultancy.

3.4 Project monitoring and evaluation methods:
Please note the method and resources you will dedicate to monitoring the progress of the project in reaching its objectives, and evaluating the effectiveness of the activities outlined in this application to meet the objectives. You have up to 200 words to answer this question.
3.5 Project risks
Please identify any risks that could threaten the success of the project, and the measures you will take to reduce or mitigate the risk. A risk could include the risk of teachers striking during the project, and what steps you will take to reduce the impact of this on the project. You have up to 500 words to answer this question.

3.6 How will the collaboration continue post-funding and how will the outcomes of the project be built upon?
Please provide details on how you will sustain the outcomes of the project post-funding, e.g. how you will maintain the collaboration? Please also provide information about how this will be funded. You have up to 300 words to answer this question.
4. Project planning and resourcing

This section provides you an opportunity to outline the list of activities planned in the project, the funding requested, and any intellectual property agreements that you have agreed with your project partners.

4.1 Please provide a detailed description of the activities to be undertaken during the project:

Describe the programme of work to be undertaken during the project including how novel, realistic/ambitious the project is. Outline the specific deliverables anticipated and appropriate milestones by which to measure progress. Your description should include:

- Description of the agreed work programme(s) against the objectives, including a breakdown of tasks with which team member will lead and in which country they are to take place.
- A detailed technical case for the programme work
- Outline of the planned stages
- Activities that will be undertaken

Please note: All responsibility for arranging travel and accommodation will lie with the lead applicant

There is an option to upload any supporting documents, figures and diagrams in the next question. You have up to 1000 words to answer this question.

4.2 Images and diagrams:

Upload any images and/or diagrams. They should be appropriately referenced in your previous answer. You can upload a maximum of one file, so if you have multiple images to display then please collate them into a single file, and be sure to arrange them in the order you would like them viewed. A PDF file would be the most user-friendly format.

4.3 GANTT Chart/Project activity timeline:

Please upload a detailed GANTT chart outlining your agreed work programme, including a breakdown of milestones, activities, indicators and target dates for specific elements of the project and the cost breakdown associated with each stage. Please feel free to use the RAEng GANTT Chart template found in the HEP SSA website’s application section

A Gantt chart is a useful graphical tool which shows activities or tasks performed against time. It is also known as visual presentation of a project where the activities are broken down and displayed on a chart which makes it is easy to understand and interpret.

4.4 Breakdown of funding request:

Please use this budget template for submitting your project budget. Please outline the total costs of your work programme and clearly show the support you are requesting from the Academy and any contribution your partnership will offer including any in-kind contributions. The funding will be awarded to the hub institution, unless otherwise requested. If requested, the funding can be split between the hub university and UK partner. The Recipient(s) of grant funding will be expected to provide all parties with resources to enable the programme of activities to take place. Partners within applications should make such financial arrangements before the application is submitted, and evidence of such arrangements will be required at the contractual stage. Funding guidelines: The total contribution requested from the Academy must be up to GBP 140,000.00 Please feel free to use the RAEng Budget template found in the HEP SSA website’s application section
- The funding should be used to fund two way bilateral secondments between local industry and academia, training fees, travel and accommodation, resources & materials, and the host institutions expenses such as temporary replacement of staff or resources. The funding should also be used to host workshops to engage and include the all partners for knowledge sharing platforms.
- This programme also offers support for travel, subsistence and salary support costs related to conducting visits and exchanges in support of collaborative activities among industry and academic partners in Africa and the UK.
- There is no set limit on how much you can claim in any one category apart from consumables and other costs, where no more than 10% of the total cost may be requested. Consumables include specific project costs of small equipment, computer software licences or publication costs. Examples of other costs are conference attendance and seminar fees.
- Successful applicants will receive 25% of the total award value at the project’s start, after contract signature, and the subsequent payments will be paid every quarter upon receipt of a satisfactory quarterly progress and expenditure report.
- Additional costs on top of the grant funding must be met by the participating Institutions or leveraged from elsewhere with clear indication with respect to the source of the matched contribution.
- The funding provided cannot be used to pay for purchases of large equipment and research infrastructure.

Please provide a brief explanation of all costs, covering both what the funds will be spent on and why. We require evidence that you have researched the costs for which you are seeking support; for example, you could include the cost per night for accommodation. Travel costs should be based on the most suitable and economical form of travel. Subsistence costs should reflect the normal rates applied by the host institution(s).

4.5 Additional funding/ In-Kind contributions details:
Please provide details of additional funding which will be provided by the partnering organisations or others in support of the project. Please note that in-kind support including, labour, equipment and monetary support will be accepted. For more information please refer to the FAQs on the website.

You have up to 300 words to answer this question.

4.6 Please provide details on the ownership of any pre-existing or future Intellectual Property Rights to be used/ generated and any formal agreements to this effect (input N/A if not applicable):
If the project involves the use or potential generation of Intellectual Property, provide the details of any relevant agreements. If no formal agreement exists or is planned, include considerations of any potential risk to Intellectual Property Rights (IPR) and how the risk will be mitigated. Please note: In projects which aims to generate IP, the Academy expects the Hub and partner institutions to agree in writing on IPR before the start of the exchange. Any agreement should allow for agreed dissemination activity to be undertaken unhindered. The Academy will not have any claim on research funded by the scheme. Guidance on reaching Industry Academia IP agreements as well as model arrangements for collaborative research can be found here:


You have up to 300 words to answer this question.
5. Additional Questions (for previous Hubs only)

5.1 Previous award challenges:
Building on from your last two-year project under HEP SSA, outline the challenges you experienced and the lessons you have learnt from the project. Include a list of lessons learnt, and subsequent changes you intend to implement to improve from your last project under HEP SSA, if selected for further funding. You have up to 300 words to answer this question.

5.2 Justification for further funding:
Explain why your institution will benefit from further funding to achieve the overall objective of addressing the engineering skills gap and skills shortage in engineering in sub-Saharan Africa. Include why your institution requires further support, what you intend to achieve, and how this funding fits into your institutional or departmental long-term strategy. This is an opportunity to explain any financial changes you are intending to implement. You have up to 300 words to answer this question.

5.3 Project sustainability
What steps have you taken to ensure the sustainability of the project post-funding? As HEP SSA is aimed at building partnerships with Industry and Academia, this section is an opportunity to explain how your university, as a Hub, used the funding to create substantial partnerships and continue the project post-RAEng funding. Include, other sources of funding, industry support, and any plans or notable engagements with local, regional or national governments or institutions including MOUs, agreements or in-kind support. You have up to 300 words to answer this question.

5.4 UK partnership
Outline any notable changes to your UK partnership to ensure a better working relationship throughout the duration of the project. Please outline any changes, new approaches or improvement to the partnership implementation. Please also include any information relating to MOUs, the role of the partnership, and achievable objectives agreed with the UK partner. You have up to 300 words to answer this question.

5.5 Additional Information
Please upload any additional information that you deem relevant/or important in explaining why your institution should receive further funding. This may include case studies, statistics, or recommendation letters from the project partners and stakeholders.
6. Letters of support and declaration

6.1 Letters of support from the Vice-Chancellor (or equivalent):

The Vice-Chancellor, or equivalent at the lead applicant’s university should write a letter of support outlining the organisational support for this project. The letter should be on headed paper, a maximum of two pages long, signed by the author, and uploaded as a pdf file. As a minimum, the author should include:

- Confirmation of their support for the application
- Why they support the project
- How it fits the department’s aims
- What form the support will take?

Please also copy the bullet points below directly into your institution’s letter of support:

- The project will be led by a full-time member of staff throughout the duration of the project.
- The applicant, and any co-applicant(s) will be given full access to the facilities, equipment personnel and funding as required by the applicant.
- The costs submitted in the application are correct and sufficient to complete the award as envisaged. Any shortfall in funding will be met by the institution/university.
- The institution will ensure that the proposed programme of work has been agreed between all institutions involved in the project and that all necessary contracts, visas, IPR agreements, financial processes and other necessary arrangements are in place before the start of the exchange.
- The institution is satisfied that language will not be a barrier regarding a successful collaboration and, if necessary, sufficient language support and training will be obtained in advance of the project.

6.2 UK Partner’s letter of support:

Provide a letter of support from the UK partner(s) taking part in the project. Please refer to the FAQs for information regarding the UK partner eligibility. If you do not have a UK partner, please contact the Academy who can help facilitate a partnership.

The UK partner letter of support should include:

- Confirmation of their support for the application
- Outlining their role within the project
- How it fits within their strategic aims
- What form the support will take (financial, staff time, guidance, facilities, facilitation, etc)
  The letter should be on headed paper, a maximum of two pages long, signed by the author, and uploaded as a pdf file.

6.3 Application Declaration

Once you are satisfied with the application that you have submitted, please sign your name and position, and tick the checkbox which states you are satisfied with the conditions of this scheme. Please
7. Marketing

7.1 Where did you hear about this scheme?
Please select all the relevant options. The information provided will help us improve our communication strategy. This will not affect the outcome of your application.

- Social Media
- Email
- Colleague or Friend
- RAEng Newsletter
- HEP SSA Website
- From a previous awardee or applicant
- From a UK institution
- From an African institution
- Other

7.2 If you have selected other, please specify