

Call for Proposals Research and Innovation Grants in Engineering - 2022/2023

KENET Research and Innovation Grants Overview

KENET has, as one of its mandates, the role of catalyzing collaboration in research and education among member universities and research institutions. KENET promotes collaboration through facilitation of Special Interest Groups (SIGs) in priority academic areas, discovery of active researchers/faculty, provision of research grants to researchers and member institutions, as well as travel grants for faculty and/or graduate students in SIG areas.

Engineering and Innovation are important pillars in the development of any society. For Kenya to industrialize and improve the wellbeing of her people, increasing investment in research and development within Engineering is a must. This call seeks to fund research in engineering with great potential for impact in Kenya.

We seek to fund projects that will support or lead to the establishment of vibrant multidisciplinary research groups in engineering disciplines including but not limited to Electrical Engineering, Civil Engineering, Mechanical Engineering, Mechatronic Engineering, Chemical Engineering and Biomedical Engineering as applied to three focus areas described in the next year.

Research and Innovation Grant: Areas of Focus

The areas of focus for this round of research and innovation grants:

- i. Device Development for Climate Resilient Agriculture (DDA)
- ii. Device Development for Improved Healthcare Provision (DDH)
- iii. Device Development for Environmental Monitoring (DDE)

Areas of Focus: Objectives

1. Device Development for Climate Resilient Agriculture (DDA)

Proposals in this focus area will develop new devices and systems to enable rural small-scale farmers to improve their resilience to climate change. These systems will, for example, allow improved farming practices or promote the adoption of new crops/livestock in areas dominated by crops/livestock particularly susceptible to climate change.

2. Device Development for Improved Healthcare Provision (DDH)

The COVID-19 pandemic exposed the need for improved local capacity in medical device development. This focus area aims to support research aimed at the development and verification of medical devices.

3. Device Development for Environmental Monitoring (DDE)

The climate crisis has led to an increase in extreme weather events and there is a need for Kenya to develop systems aimed at environmental monitoring that can serve as early warning systems. In addition, local environmental monitoring systems would lead to increased data collection across the country, which is likely to improve decision making, for example in disaster preparedness and food production. We seek proposals that will develop devices and systems with potential impact in mitigating the climate crisis by improved monitoring of environmental variables.

Grant Structure and Schedule

KENET Research and Innovation Grants Structure

1. **Three** (3) grants will be awarded for the 2022/2023 round of funding.
2. Each innovation grant will be for a maximum of KES 1.5 million
3. The grant period is 12 months.

Schedule:

Activity	Dates
Call for proposals open for submissions	4 th February 2022 to 4 th March 2022
Review and evaluation of received proposals	7 th – 25 th March 2022
Face-to-face presentations of shortlisted applicants	March 2022
Finalists announced and grants awarded	April 2022
Grantees on-boarding	April 2022
Implementation period	April 2022 - April 2023
Evaluation, reporting and close-out	E & M – quarterly per group

Table 1 shows the innovation grant’s call timeline.

Table 1: Call Timeline

Eligibility, Terms and Conditions

Eligibility

Applicants must

1. Have a PhD in one of the engineering disciplines received within the last 10 years.
2. Have an existing research team or show proof of the ability to establish a research team at their university. This team must include full-time postgraduate students.
3. Be based at an accredited engineering program at a Kenyan university with active postgraduate programs.
4. Show a track record of postgraduate student supervision.
5. Have published work in peer reviewed journals and conferences indexed in Scopus or Web of Science in the past 12 months.
6. Obtain written approval from the Head of Department and Dean/Director of respective school of engineering.

Post-Award Requirements

The successful grantees will be expected to:

1. Provide quarterly progress reports to the Engineering research associate at KENET
2. Participate and present project work at selected meetups organized by KENET
3. Grow a community of improved research practice.
4. Actively seek funding to further their research work by writing (joint) funding proposals to other agencies
5. Prepare a final project report at the end of the grant period and submit it to KENET
6. Prepare an abridged version of the project report for profiling on KENET's and institutional websites.
7. Publish paper(s) on their work in reputable journals. These papers should acknowledge the KENET grant.

Proposal Submission

We expect proposals to include the following sections:

1. Abstract (200 words)
2. Justification - this section should introduce the research area and explain why it is an important research problem. (300 words)
3. Methodology - Clearly explain your technical approach and cite appropriate literature. (400 words)
4. Team description - we expect all research to be conducted within a research group. Describe your existing or proposed research group. (100 words)
5. Ethics and Data sharing statement - Explain any ethical aspects of your work as well as how you will share data generated by your project (100 words)
6. Timeline - include a realistic work plan with associated timeline
7. Budget (Up to KES 1.5 million) and budget justification.

Proposals must adhere to the word limits stated and must not exceed 4 pages including figures and references.

To give your proposal a good chance of success, we would like to stress the importance of clear and concise writing. We also recommend the following resources:

1. Kraicer, J. (1997). The art of grantsmanship. Online: https://medecine.umontreal.ca/wp-content/uploads/sites/8/2015/01/CatalogueAteliersFacMed_ICM_Annexe1.pdf
2. Bourne, P. E., & Chalupa, L. M. (2006). Ten simple rules for getting grants.

Supporting Documents

The following documents should be included as part of the proposal submission:

1. Team profile document, indicating the names, institutional affiliation and brief biographies of the lead researcher(s). Details of other team members and any collaborating institutions should also be included in the team profile.
2. CVs of the lead researcher(s), clearly profiling research activities undertaken to date as well as relevant publications.
3. Letters of Commitment from team members and any collaborating institutions.

Proposal submission

Proposals with all supporting documentation should be sent via email to edutechgrants@kenet.or.ke on or before February 25, 2022, 11.00 PM East African time

Enquiries and applicant support

All enquiries and requests for further information related to this call should be addressed to grantsadmin@kenet.or.ke.

Proposal Evaluation

Evaluation Criteria

Proposals will be evaluated on

1. Relevance of the proposed research.
2. Ability to deliver on proposed work - does the team have the required expertise.
3. Team composition with demonstrable ability to mentor postgraduate students.
4. Institutional support - is there support for the proposed activity from the host institution
5. Integrity - plagiarism and other forms of academic fraud will be grounds for disqualification.
6. Sustainability - is this work able to attract further research funding

Table 2 shows elements of this evaluation in greater detail.

Evaluation Criteria	Evaluation Aspects	Weighted Score
Justification	Is the proposed project relevant to engineering? Is the research area current and relevant in the Kenyan context? Does the work have the potential for significant impact?	10%
Contribution	Is the contribution of the work clear? Does the work fill a clearly identified research gap	10%
Methodology	Are the methods appropriate and adequately described?	30%
Team composition	Does the team possess technical skills in the area of focus? Are postgraduate students involved in the work? Is there a track record of postgraduate student supervision?	20%
Student support	Is there an adequate mechanism to ensure postgraduate student progress?	10%
Community engagement	Will the team create a community of research practice in the chosen discipline? Will the team share data and research outcomes? Is the mechanism for dissemination clear?	10%
Sustainability	Is there potential for future funding?	10%

Table 2: Evaluation Criteria

Evaluation Process

1. KENET will constitute a review panel of leading engineering experts. Members of the review panel will sign Non-Disclosure Agreements, as well as statements acknowledging that they will make no claim to the intellectual property developed by the grantees.
2. The reviewers will review all received applications as per the evaluation criteria provided in Table 2 and select the top six (6) proposals.
3. The top six (6) finalists will be invited for a final face-to-face presentation. During the oral presentations, the applicants will respond to and clarify any questions from the panel that will have arisen out of their written submissions. They will also be required to respond to any ad-hoc questions arising from the oral presentation.
4. After the oral presentations, the reviewers will make their final decisions on which three (3) proposals will receive the grant.
5. Selected grantees will be notified formally and profiled on KENET's website.

