



Terms of Reference for AREF Researcher Development Management System

Background

Our mission is to nurture, mentor, and support a community of health researchers across Africa to become research experts and leaders, capable of tackling African and global health challenges.

The challenge

AREF's mission comes at a time when the spread of diseases such as Ebola, Zika, and COVID-19 show the major risks to global health when one part of the world does not have the research capacity to timely detect and respond to disease outbreaks.

Africa shoulders a disproportionate 25% share of the world's disease burden. Common infectious and non-communicable diseases continue to devastate, as new and drug-resistant diseases constantly emerge. We are also living in an age where global pandemics and climate change are adding to the threat to lives and livelihoods across the world.

Research institutions in the Global North dominate research efforts, with African scientists contributing less than 3% to global research publications. If Africa is to respond to the continent's health challenges, it needs to build and sustain a community of health researchers to redress the imbalance of who sets Africa's research agenda and priorities.

To get there, the health research sector needs significant investment. Too many of Africa's brightest, emerging researchers are frustrated due to lack of funding and opportunities to succeed, such that many opt to leave health research altogether.

Our response

AREF was founded in 2015 to improve the quality and impact of health research in Africa. Our ambitions are rooted in the strong conviction that Africa's health research agenda and priorities should be defined by Africans, in partnership with leading researchers across the world.

- We support researchers at the early stage of their careers, typically 1 to 6 years after a PhD award, with research training, mentoring, leadership development and fellowship funding.
- We partner with academic and research institutions in Africa, to improve their research ecosystems for sound, inclusive, and equitable research cultures.

- We are building a strong and sustainable African researcher community, where researchers are growing their networks and improving research practice, collaboration and output.
- We collaborate with stakeholders to mobilise resource for building researchers' capacity that is responsive to the prevailing health needs and challenges.

It is thanks to funding from individuals, charitable foundations, companies, and institutions that AREF has been able to train and nurture over 800 emerging African health researchers. They are winning research funding, producing world-class research publications, building networks, gaining promotion, and finding solutions to prevailing health challenges.

Purpose of the Request for Proposal (RFP)

The purpose of this RFP is to solicit the services of a firm to develop a Researcher Development Management System that will enable AREF to manage, share, collect, store and analyse participant and programmatic data in a centralized and secure system. The system should provide a holistic IT solution that addresses the programme and people management as well as monitoring and evaluation (M&E) needs of AREF, taking into consideration its existing processes and tools to ensure a smooth transition to a digital platform that consists of the following key components:

- **Database Management** – for its programme participants and beneficiaries, including its growing Alumni Network and College of Experts (Priority Level = High)
- **Performance Management** – for outcome and output indicator tracking and impact measurement based on our Theory of Change and Results Framework (Priority Level = High)
- **Programme Management** – this includes activity planning (annual work plan) and task management (Priority Level = High)
- **Finance** – this includes tracking of programmatic budgets and expenditure for BVA, ROI and cost-effectiveness analyses (annual budget) and a workflow for processing invoices internally. (Priority Level = Low)

Our Researchers

AREF supports early and mid-career, primarily post-doctoral, researchers from across Africa who undertake biomedical/health related research, in its broadest sense. These researchers primarily work within African Universities, research institutions and research hospitals. Usually, their roles will include teaching and/or clinical commitments as well as research.

Currently, there are over 800 AREF alumni from 42 different countries, who have participated in AREF programmes over the last 10 years. Each year AREF delivers a variety of professional development opportunities for new incoming participants of AREF programmes as well as for our alumni.

Our Programmes

AREF delivers a range of professional development programmes for researchers. These programmes are complex, taking place over months or years. Programmes include a variety of different components, including virtual sessions, multiple day residential workshops, small group peer coaching, mentoring and research placements (see annex 2 for more details). Key programmes include:

- AREF Grant Writing Programme (virtual or hybrid), 2-3 months in length
- Towards Leadership Programme (Hybrid) yearlong programme
- Bespoke leadership programmes. Delivery mode and length determined by funding and the needs of the specific cohorts. These can be multiple year programmes with many training components.
- Researcher Development Fellowships. These are 3 to 9-month placement fellowships with 3 months pre and post placement support, which includes training and mentoring elements.
- AREF Alumni programme. Seminar and networking series to support our AREF alumni.

In 2025 we will be actively delivering five grant writing programmes (3 virtual, 2 hybrid) supporting eight different leadership cohorts, and awarding 27 new fellowships whilst supporting 22 active fellowships.

System Requirements

The AREF M&E Information Management System is expected to adhere to the following **general system requirements**:

- It will be a cloud-based or web-based system with relevant related operations digitalised and easily accessible anywhere via mobile phones, laptops and desktop computers with internet availability.
- The structure will be modularised for data capture and analysis of project components and subcomponents.
- It will have the ability for offline data capture which would be uploaded into the system when internet connection is available, and the data can be visualised in real time.
- It will have a GIS module to identify geo-locations of project activities and beneficiaries.

Additionally, the following **administrative and security** features should be included:

- Give flexibility to control data with recovery, traceability settings and user rights management.

- Set User profiles and permissions for quality check to allow reviewing and approval of data entered by different users.
- Audit trail for enhanced traceability and transparency - e.g. logins and logouts, record of details such as name and time when data was modified in the system, record of anytime the system has an error due to software fault, etc.
- Data deletion Recovery
- Advanced security settings
- Structured and user defined reports on all the data entry forms which can be exported to different formats e.g. Excel, word, PDF, etc.

Essential Components

1. Database Management (H)

The platform will permit a two-way flow of information between **administrators** and **beneficiaries**.

Administrators will be able to register participants or alumni into the system for each programme or activity manually or by importing a pre-filled excel file. They will also be able to input monitoring and evaluation data related to each participant including:

- Activities upcoming and attended (including training workshops, virtual sessions, seminars and conferences)
- Message from AREF staff and/or facilitators
- Communication about upcoming activities
- Ability to turn in activities/assignments for facilitators review
- Progress on key performance indicators and other achievements (e.g. grants won, promotions, research publications, awards given, etc...) - the system should be able to identify any duplication of data and flag it for elimination
- Evaluations assigned to their specific programme for specific time periods (pre-programme, interim, post-programme).

Administrators with the appropriate level of authorization will be able to modify and update such information, leaving an audit trail that can be traced to the specific user. They should also be able to export datasets in excel format and individual profiles in pdf format.

Participants will have access to the system through a user-friendly portal using secure login credentials provided by AREF after registration. This portal will allow users to access their profiles to:

- Periodically update their personal and professional information
- Register attendance to capacity building activities offered by AREF and third parties
- Create a professional development plan (PDP) that is linked to a competency framework (e.g. Vitae Researcher Development Framework)
- Report progress on their professional goals in their PDPs
- Share progress on key performance indicators and other achievements (e.g. grants won, promotions, research publications, awards given, etc...)

- Import a variety of file formats as documentary evidence (word, pdf, jpeg, emails, etc...)
- Download a summary of their profile and data

AREF Expert Reviewers, Facilitators and Mentors

The platform will allow the administrators to register experts into the system for each programme or activity manually or by importing a pre-filled Excel file. They will also be able to input or import data related to each member including:

- Work assigned for each programme.
- Evaluation of work
- Availability to support AREF
- Track the various activities participated in, including mentoring, facilitation, guest speaker, etc.

The platform should also be able to have the functionality to integrate with Survey Monkey where we receive applications for new college of expert members.

2. Performance Management (H)

- The system should have the capability of incorporating AREF's Theory of Change (ToC) and Results Framework, with outcome and output indicators linked to specific objectives hierarchically.
- It should also be able to incorporate project logical frameworks that feed into the overarching ToC and Results Framework for higher-level M&E data analysis and visualization.
- The system should have survey design and management capabilities and/or support integration with external survey platforms such as SurveyMonkey and MS Forms.
- Internal users should be able to interact effectively with this data in a variety of formats including tables, graphs, dashboard analytics and maps (see annex 1 for dashboard and GIS mapping features)
- The system should allow for easy filtering of information with data aggregation and disaggregation features (e.g. by programme category, sub-category, year, gender, research area, etc...) and access limited to different categories of users with varying levels of authorization.

The system should support data export and reporting capabilities in a variety of formats including, excel, pdf, jpeg and other relevant formats. Predefined reports can be defined based on the needs AREF and project data reporting requirements.

Desirable Components

3. Project Management (H)

- It is desirable that the system supports basic planning and task management features. This includes planning for activities that are linked to specific programmes based on an annual plan and reporting on progress on a periodic basis.
- This should be accompanied with a task management module that assigns tasks under each activity to a specific individual/user which can then be tracked through a table/list, sophisticated Gantt chart and calendar.
- Task reminders with email notifications when tasks are due and for upcoming tasks

4. Finance (L)

Each programme or project should be able to be registered with a programmatic budget associated with a specific funder with the ability to do basic analysis such as budget vs actuals (BVA analysis).

Annex 1: Dashboard Specifications

Types of Dashboards

The dashboard of the proposed system includes the following:

- Overview of Programmes - This will give overview of all programme statuses with relevant information displayed (project summary, progress, statistics, tables, charts, etc).
- Activities - This will provide a more detailed information on the activities of different programmes and projects managed by AREF in a given period (details on the dashboards specific to activities and indicators will be discussed with the AREF and the selected firm).
- Participant facing dashboard - Allows participants to receive and input programme and M&E data; Allows skills needs analysis and professional development planning for participants/alumni; Easily accessed by mobile phone

Dashboard Features

- The features of the dashboards include but not limited to the following:
- Analytics: Analysis in the form of charts and tables will be available for various types of project information. The said charts or tables will be customised on the needs and requirements of the project data needs.
- Filters: programme or project information can be filtered by date, gender and other customised filters to allow generation of specific reports.
- Reports: Predefined reports can be defined based on the needs AREF and programme/project data reporting requirements. Such reports will be exportable to Excel, PDF, Word and other formats.
- Built-in tracking and visualization tools
- Instant information with real-time data and appropriate graphics

- Interactive map with geolocation of beneficiaries and spatial representation of indicators and activities. It should have filters, as well as sharing and exporting capabilities. (nice to have, but not a critical feature of the system).

Annex 2: Overview of Programmes

Awards Programmes:

- **Research Development Fellowship (RDF):** The research development fellowships are AREF's flagship awards programme. The fellowships enable African postdoctoral researchers to spend 3-9 months at a research centre of excellence of their choice either in Africa or in Europe. These awards (of up to £47,000) are highly competitive and are selected through an AREF open call, with 2 rounds of peer review and a final selection panel. Currently, AREF is managing 3 active cohorts.
- **Seed Fund:** Seed fund awards are open to individual RDF cohorts within the year the majority of the cohort finishes their fellowship. This award is up to £50,000 for the researchers to embed the knowledge and skills they have gained from their fellowship into their research in their home institution in Africa. Currently, AREF is managing 3 active cohorts.
- **Tumani Corrah Prize:** The Prize recognizes excellence in research, personal development or service that is attributable in large part to participation in an AREF programme. Each year this Prize is intended to recognise the achievement of AREF alumni from a specific year (this year is 2020). £4,000 will be awarded to the winner and £1,000 for the runner-up, payable to their institution, together with a certificate. Winners will be able to use the prize money flexibly to support their research and their professional research career development.

Academy Programmes:

- **Towards Leadership Programme:** This is a one-year programme to support the leadership development of postdoctoral researchers as they transition into independent research leaders. It includes a combination of face-to-face and virtual training, mentoring, and coaching sessions to support participants as they embed the different aspects of leadership into their work life. Currently, there are 2 active cohorts (TL3 & TL4).
- **Bespoke Leadership Programmes:** AREF runs a number of bespoke leadership programmes that have been commissioned by various funders/research institutions. This includes the African Postdoctoral Training Initiative (APTI), Global Health Research Group on Global Health and Palliative Care (GHAP), "Linking Infectious disease Front-liners' control Efforts with central public health authorities in The

African Great Lakes Region" (GREAT-LIFE), and finally the International Statistics and Epidemiology Partnership (ISEP).

- **Excell Leadership Development:** This is two-year program that will build the skills, knowledge and capacity of individuals and research institutions in Africa and will continue to develop the reach and influence of the wider research community network. Uniquely, Excell goes beyond delivering a leadership development programme: it supports partner institutions to embed structural changes that will enhance their ability to support emerging health research leaders.
- **Grant Writing Programme:** AREF runs a number of grant writing programmes throughout the year that are delivered in both virtual and hybrid formats. AREF virtual grant writing programme is ~approximately 2 months long, consisting of 8 training days, split over 2 weeks (5 days; 3 days respectively), with a 6-week break in between these weeks for them to develop an extended concept note and give/receive peer review. This year, AREF will also launch a "Grant Writing Train the Trainer Programme" to train alumni who are interested in learning how to deliver AREF Grant Writing Programmes.
- **Equitable Partnerships Programme:** This is a four-day programme delivered face to face, the content of which is broadly based on the Transformative Collaborations Charter. The participants are researchers who have been funded through an MRF grant to support UK-African research partnerships to conduct research on the impact of climate change on health. Participants work in pairs (UK researchers as primary Investigators and African researchers as Co-PIs) and are generally a combination of early career and mid-career researchers.
- **Alumni Network:** The researchers are the alumni from all the AREF awards and academy programmes. They are more than 800 researchers from 42 different countries..... and growing every year! We hold alumni seminars, networking and funding panel sessions, ideally at least 6 a year. There will also be a sub-network for an AREF Malaria network, which will have specific training programmes and events specifically for these alumni.