Call for Expressions of Interest:

Managing Organization (Hub) for Responsible Artificial Intelligence for a Gender and Inclusion Innovation Research Network in Africa

Date issued: April 26, 2021
Deadline for expressions of interest: May 30, 2021 (23:59 EST)

The International Development Research Centre (IDRC) and the Swedish International Development Agency (Sida) invite expressions of interest from individual organizations, or consortia of organizations to express interest in applying for a grant to play the role of the Innovation Research Hub for an African-based research network on responsible artificial intelligence innovations that seek to advance gender equality and the inclusion of marginalized communities across Africa. **The Hub will design, develop, and manage the gender and inclusion innovation research network as key part of the Artificial intelligence for Development in Africa program (AI4D Africa).**

The call is open to individual organizations based in lower and lower-middle income countries (LLMIC) in sub-Saharan Africa (SSA) [1] (see Annex I for list of eligible countries), or consortia of up to three organizations with the lead organization based in an LLMIC in SSA. This call for expressions of interest is not open to individuals or government ministries and agencies.

This call is part of the four-year [Artificial Intelligence for Development in Africa](#) (AI4D Africa) program dedicated to accelerating the realization of Africa's Artificial Intelligence (AI) innovations towards achieving continental, and global development goals. AI4D Africa partners with African AI communities to support the responsible, home-grown development and deployment of AI through investments in innovation, policy research, and capacity. For investments in innovation, AI4D Africa will support four, pan-African innovation research networks focused on climate change, agriculture and food systems, education, and gender/inclusion. This call is to select a managing organization (henceforth the **Hub**) for the gender and inclusion innovation research network.

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[1] As per the World Bank official statistics: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519

The **AI and Gender and Inclusion Hub** will be an interdisciplinary network designed to incubate (design, pilot, and evaluate) and then scale responsible AI4D innovations in to advance gender equality and inclusion in automated decision making and machine learning. The selected Hub will engage in field-building activities to design and implement an innovation research network of researchers and innovators applying responsible AI to advance gender equality and inclusion, from remedying biased algorithms to advancing new innovations that advance justice, access to government and financial services, climate change, improved health outcomes, reduced gender based violence, and more. The selected organization will also be responsible for the following *indicative* and non-exhaustive set of activities:

> **Defining Artificial Intelligence**
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> For this initiative, we use the OECD definition of an **A**rtificial **I**ntelligence system as a "machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy."

- Supporting the competitive selection of high-quality research projects from African innovators and researchers who work in multi-disciplinary ways at the intersection of Artificial Intelligence, gender and inclusion studies, and other related domains;
- Providing conceptual and technical support and guidance to the research network members as required, including supporting field building, ensuring responsible AI innovation development and deployment of new algorithms and approaches, and ensuring that deployment takes a variety of intersectional aspects into account;
- Support the exchange of knowledge and good practices between network members, including ongoing engagement with a global network of researchers;
- Building synergies and collaborate where appropriate with other AI and fairness / gender equality communities; and
- Contributing to the strategic guidance of the AI4D Africa program.

Note that all innovation work supported will seek to be *responsible* and uphold the Principles for Digital Development.

> **Responsible AI**
> While there is no one definition of responsible AI, there are various frameworks and definitions that focus on similar issues including ethics, transparency and accountability, guarding against biased data, maintenance of user trust and individual privacy, respecting individual's autonomy, etc. See, for example; Responsible Innovation in Canada and Beyond, the Responsible Innovation Framework: A

We encourage all applicants to read the original AI4D Program Proposal **(English version, version française).**

Artificial Intelligence for Gender and Inclusion

Artificial intelligence (AI) applications are profoundly impacting our world. AI is a set of technologies upon which applications are being built and applied in almost every domain of social and economic life. Fuelled by the increasing availability of computational power, improved connectivity, and data, AI offers innovative ways to promote human development by spurring new start-ups, adding value along the entire agricultural value chain, higher quality education systems, and tackling pressing health and climate challenges for many low- and middle-income countries in Africa. The resulting impact stands to be massive, if not revolutionary.

However, the deployment of artificial intelligence solutions for development without regard to the technical and social limitations and appropriate contexts of the surrounding environment can create high-risk applications that have the potential to augment social and economic inequalities, harm democracy, and limit freedoms. For example, Automated Decision Making systems (ADMs) often use data and predictive analytics to make decisions such as access to a loan, fit for a job, or to predict an area or region that might be in need of additional resources due to drought or criminal activity. However, these systems can be shaped by bias such as data, flawed assumptions in algorithms[2], unconsidered and unseen historical power dynamics, or unrepresentative samples or experiences. When systems become biased[3], they can actually amplify the existing inequalities, causing unintentional harm to women and to other groups who experience marginalization,

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[2] Hanna, A., & Denton, E. (2020). Towards a critical race methodology in algorithmic fairness | Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency. Association for Computing Machinery. https://dl.acm.org/doi/abs/10.1145/3351095.3372826

[3] Birhane, A., & Guest, O. (2020). Towards decolonising computational sciences. ArXiv:2009.14258 [Cs]. http://arxiv.org/abs/2009.14258

limiting access to social protection systems, access to justice, finance[4] and social welfare[5], or accurate health diagnosis[6] as just a small set of examples of potential risk[7].

In addition, the challenge of mitigating biases and ensuring fairness[8] and promoting the explainability of automated decisions to the communities most impacted by them, there is also a need to ensure that funding promotes the development, testing and deployment of AI that focuses on persistent drivers of inequality, or that focuses on advancing gender equality and inclusion. For example, artificial intelligence applications can help promote less biased human decision making by pointing out patterns of inequity, it can automate service delivery, and it can automate access to information.

However, there remains relatively little research that understands and addresses both biases in machine learning, funding gaps for applications focused on women, that looks at structural, policy and organizational issues that limit innovation, and that seeks to deploy applications that seek to advance gender equality within specific domains. Therefore, this gender equality and inclusion hub will be expected to propose a field building agenda as well as an approach to supporting, testing and scaling positive case studies. The applicant should also take into consideration two or more relevant domains for advancing AI for gender equality, to leveraging existing knowledge and research focused in Africa on the challenges of deploying gender centric technology, and help to promote practices, guidelines and efforts that seek to ensure gender considerations, methodologies and standards can be taken up in AI research more broadly.

To summarize, the applicant should take the following broad issues into consideration in the context of both African innovation and when developing their proposals:

- Testing context specific approaches that engage a multi-disciplinary group of experts to promote policy shifts, technical methodologies and best practices that seek to debias AI, ensure it is responsible, and to ensure that the deployment lifecycle reduces potential harm and redresses any potential inequalities;
- Advancing research focused on building positive case studies in a variety of domains to deploy artificial intelligence for to advance gender equality outcomes (for example, in

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[4] Curtice, K., & Choo, E. (2020). Indigenous populations: Left behind in the COVID-19 response. The Lancet, 395(10239), 1753. https://doi.org/10.1016/S0140-6736(20)31242-3

[5] Hu, L., & Chen, Y. (2020). Fair classification and social welfare | Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency. https://doi.org/10.1145/3351095.3372857

[6] Cirillo, D., Catuara-Solarz, S., Morey, C., Guney, E., Subirats, L., Mellino, S., Gigante, A., Valencia, A., Rementeria, M. J., Chadha, A. S., & Mavridis, N. (2020). Sex and gender differences and biases in artificial intelligence for biomedicine and healthcare. NPJ digital medicine, 3, 81. https://doi.org/10.1038/s41746-020-0288-5

[7] UNESCO (2020), Artificial intelligence and gender equality: key findings of UNESCO's Global Dialogue Artificial intelligence and gender equality: key findings of UNESCO's Global Dialogue - UNESCO Digital Library

[8] Barocas, S., Hardt, M., & Narayanan, A. (2019). *Fairness and machine learning Limitations and Opportunities*. Fairmlbook.org. https://fairmlbook.org/

improving sexual and reproductive health outcomes, access to finance, justice, climate change), which should be based on a feasible agenda led by African advocates;

- An agenda that seeks to understand and address structural and systematic barriers to advancing gender equality and inclusion, such as the lack of women developing AI solutions, funding challenges, biased data sets, socio cultural dimensions and more, as well as understanding the appropriate limitations of what can be achieved with AI solutions.

Approach

The general objective of this innovation research network is to advance gender equality and inclusion in Africa through the responsible development and deployment of artificial intelligence innovations.

Specific objectives are to:

(1) Deepen understanding and support field building of how to develop and scale sustainable, African-led initiatives to deploy artificial intelligence in the service of improving gender equality and inclusion;

(2) Build the capacity of African innovators and researchers to develop, deploy and scale such AI applications, and to do so in a way that ensures the continued engagement of under-represented communities; and

(3) Facilitate the contribution and influence of an African research agenda on mobilizing artificial intelligence for gender equality and inclusion (and combatting bias and risks to increasing inequality from these to systems) to relevant regional international AI policy and practice conversations and agendas.

To achieve these objectives, the AI4D Africa program will support the implementation of an innovation research network, managed by the Hub, which use a competitive and open call process to bring together (~6-10) African innovators and researchers (or teams). The selected innovators and researchers will receive funding and support for a research project of at least 18 months on their innovation. It is expected that the selected projects will represent linguistic, gender, and geographic diversity across Africa; diversity across relevant areas of application of AI (focusing on supporting innovations and field building across a variety of domains); and diversity of relevant involved stakeholders, e.g., university researchers, start-ups, research-oriented think-tanks, consultancies, labs, and civil society groups working on advancing gender equality and inclusion. The Hub will play a critical role in establishing, managing, and supporting the innovation research network. Critical to this is the role of the hub in:

- Supporting researchers across the various geographies and in at least two languages (English and French), and to facilitate equitable engagement of women in research and leadership roles.

- Ensuring that each research project is multi-disciplinary, engaging researchers with different skillsets and expertise working together to advance new innovations (e.g., ensuring a combination of AI-related expertise, such as computer science, data science, and statistics; and intersectional expertise in relevant frameworks such as rights and law, sociology, or gender studies; and experience in the topics or areas of additional study (e.g. sexual and reproductive health rights, justice systems, finance, and more).

The exact nature of the role of the Hub is not fully determined to allow for the proposing organization(s) to provide information on how they propose to add value to the network to ensure that its outputs and outcomes are greater than the simple sum of the individual research projects. Given the emerging nature of this agenda

The Hub will also play an important role as an AI4D Africa implementing organization. This includes working with other innovation research Hubs to find potential points of collaboration. For example, we anticipate the need for Hubs to collectively think about critical issues such as approaches to human rights and equity assessment of and scaling of AI innovations from early on the project cycle.[9] The Hub is expected to participate in AI4D Africa strategic learning, monitoring and evaluation activities, helping to provide strategic direction to the program and maximize program synergies.

A key element of this process will involve the development of an African-led research agenda that seeks to collaborate with a global network to define an agenda the necessary components to ensure Artificial intelligence applications do not increase inequality (for example through biased predictions and decision making), and that seeks to build and pilot innovations that advance gender equality . By responsible, we are referring to AI innovations that are ethical, respect human rights, inclusive, and contribute to environmental sustainability.

Indicative Scope of Work for Network Hub

The following are *indicative* activities that *could* be performed by the Hub:

Set up and manage the network

- Establish a preliminary research agenda and scope for the network, focusing on field building and advancing the ultimate goal of gender equality and inclusion for marginalized groups – some of this may be in collaboration with an international network focused on Feminist AI Research f<a+i>r;
- Develop and run a call for proposals for AI for gender innovation research based on the innovation research agenda;

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[9] See for example the Responsible AI Design Assistant: https://oproma.github.io/rai-trustindex/

- Develop and manage a call review committee, made up of multi-disciplinary experts and ensuring equal engagement of men and women, of whom at least 50% are from Africa;
- Sub-grant to successful research teams to become members of the network and support the implementation of their innovation research projects (ensuring equity and multi-disciplinary participation of different researchers in those projects);
- Manage sub-grants to winning institutions (henceforth called "sub-grantees"), including sub-grantee monitoring and evaluation; and
- Interim and final technical and financial reporting to IDRC, according to the templates and standards.

Support to network members

- Provide technical and methodological assistance to sub-grantees as required in both AI and gender and inclusion approaches;
- Ensure network members engage in responsible AI practices and approaches – ensuring that interventions contribute to rights, inclusion, ethics and sustainability practices;
- Plan and run network workshops and other network support activities designed to collectively tackle common issues and/or facilitate cross-project collaboration and learning where appropriate;
- Support network members in finding engagement opportunities with relevant initiatives and research users (such as governments, local community leaders, civil society organizations, etc) that may benefit from their research results and methods;
- Facilitate sub-grantee reporting;
- Connect sub-grantees to other resources (knowledge, financial) as required.

External engagement

- Coordinate with other African or international AI networks of programs to engage in global and multi-disciplinary exchange, organize joint initiatives and events as appropriate, and otherwise enable the impactful and responsible development of work and field-building.

Contributing to field building, advancing knowledge and policy dialogues

- Produce a baseline scanning document of AI regarding the application of AI systems to advancing gender equality and inclusion in Africa;
- Produce ongoing report(s) and white papers on the state of AI innovations for gender and inclusion in Africa;
- Design a framework for facilitating the synthesis of lessons learned from across the different innovation projects supported by the network;
- Support uptake and scaling of research for policy or practice change with a variety of researcher users and key stakeholders and influencers;

- Require that all grantees openly release any data sets that are generated by the research project in accordance with IDRC's open data statement of principles;
- Facilitate the production, communication and marketing of research outputs stemming from the network and ensure research publication in appropriate venues in accordance with IDRC's Open Access Policy.

Contribute to the overall AI4D Africa program strategy

- Participate in the implementation steering committee of AI4D; and
- Participate in the AI4D Africa learning, monitoring, and evaluation activities.

Funding and Duration

AI4D Africa will allocate up to CA$1.2 million to perform the duties of the Hub. The project can be up to 30 months in duration. For a consortium, IDRC will enter into a funding agreement only with the lead organization.

Eligibility

This call for expressions of interest is open to individual organizations or groups of organizations that:

- Have their headquarters based in lower and lower-middle income countries in Sub-Saharan Africa with preference given for organizations in low- and medium-income countries (see Annex I for complete list).
- Have a proven record of working in Africa and supporting the design, development, and scaling of AI innovations, as well as capacity and expertise around specific domains and their relevance to advancing gender equality and inclusion on the continent;
- Have a team with expertise in AI, as well as in advancing gender equality and inclusion and in other relevant areas as identified.
- Ability to work in both English and French at a minimum. Other languages a plus.

Transdisciplinary consortia are encouraged to apply. Consortia may consist of up to three (3) organizations. In case of a consortium, the expression of interest needs to provide a rationale explaining why the consortium has come together to implement this innovation research network and describe the role and added value provided by each member organization. Consortia must describe the governance and coordination arrangements they will use to produce high quality work and support fair and equitable partnerships.

NB: *This call for expressions of interest is not open to individuals or government ministries and agencies, but it is open to public research institutes and public university centers, labs and departments, as well as think tanks or relevant civil society groups with a strong history of working with women and other groups to advance gender equality and inclusion. It is also open to private sector actors.*

In case of a consortium application, individual members can be based in different countries and the non-leading members may be based in countries other than the list of Annex I. However, the leading member can only be based in an eligible country. IDRC will get into contractual agreement with the lead member only. The other members will be considered as subgrantees.

Expression of Interest Requirements

The applicant organization (or, in the case of consortium, the lead organization) should submit an expression of interest **of no more than 4,000 words** that clearly addresses the following:

- The organization's (or consortium's) interest in becoming the Hub and how this role aligns with their organizational mandate(s).
- The organization's (or consortium's) experience running and supporting innovation and/or research networks.
- Outlining key areas where leveraging AI in support of gender equality and inclusion can bring the biggest benefit, and the challenges to achieving those benefits in that sector or domain. This may also include outlining the importance of a field-building agenda.
- How the organization or consortium has experience engaging with gender focused and rights groups, supporting participatory design activities and/or artificial intelligence/ data science for development.
- How the organization would design a gender and inclusion focused innovation research network that (1) secures diverse participation of researchers from across Africa, (2) supports responsible innovation, and (3) provides innovation and research support across a diverse agenda of research projects.
- What strategies the organization will use to ensure gender equity and the inclusion of other marginalized groups research design, implementation, and outcomes.
- Experience with research synthesis and knowledge mobilization, as well as field-building.
- The team composition and resources deemed necessary to successfully implement the network, including its evaluation and governance processes (in the case of consortium, outline the roles each member would play, which organization would lead, how partners would coordinate equitable and effective partnerships).

- What major challenges and risks the organization (or consortium) foresees in implementing the network and what actions it will take to address and mitigate those risks.
- Indicative budget. We expect that a minimum 55% of the total budget goes towards network research projects (sub-grants).

In addition, please include:

- Contact information of the lead applicant and members of the consortium if applicable.
- Abridged CVs of the lead applicant with relevant experience and key contact individuals from other organizations in the case of the consortium (CVs should be no longer than two pages).

Evaluation Criteria

IDRC and Sida will consider the following criteria in the evaluation of expressions of interest:

Knowledge and expertise on gender and inclusion AND managing AI innovations and research (25%)

- Demonstrated experience (by the host organization, or shared by the full consortia) in supporting research and innovations in Africa, in supporting action oriented research that helps to advance gender equality, inclusion and rights (in one domain or more generally) or strong experience in one of the above with proven track record of collaborations in the other domains;
- Experience and learning about scaling pathways in developing AI innovations, especially within Africa;
- Experience with machine learning or other AI applications to address pressing challenges in Africa that may augment or contribute to increasing and advancing gender equality and inclusion (for example, in access to finance, health care, access to government services, combatting gender based violence, access to justice, and more)
- Understanding of the emerging challenges of AI applications may pose to gender equality and inclusion, including bias, explainability, and more;
- Expertise in advancing a change oriented research agenda that has advance gender equality in two or more relevant research domains;
- Connections with relevant research and policy communities, and experience advocating for gender and equality in those communities.

Knowledge and expertise in supporting research and/or innovations networks that include some field-building (20%)

- Demonstrated experience running collaborative research activities and/or networks;
- Proven ability to support and guide researchers and technologists;
- Ability to facilitate knowledge exchange through participatory mechanisms both virtually and face-to-face;
- Experience managing calls for proposals processes.

Innovation research network plan (20%)

- Logical network plan that would support research projects to support field building, advance novel research, and apply it;
- Approach ensures inclusion and equity of both genders and other vulnerable groups;
- High impact knowledge synthesis and sharing activities;
- Reasonable and feasible budget.

Expertise in synthesis, learning facilitation, and knowledge mobilization (15%)

- Ability to facilitate cross-grantee learning and synthesis;
- Experience in designing and developing products that support knowledge sharing and use: high quality practitioner-oriented outputs, toolkits, rapid knowledge syntheses, supporting resources, and policy briefs;
- Experience in knowledge mobilization for policy and practice improvement.

Organizational performance (20%)

- Evidence that the organization has the basic systems, resources, and management capacities to succeed in setting up and running a Pan African research network. Capacity to work in English and French (other languages would be an asset).

Submission and Review Process

The expression of interest and all requested supporting materials must be consolidated into one PDF/Word document and sent by email to AI4DAfrica@idrc.ca, with a timestamp **no later than 23:59 EDT on May 30, 2021.** Please use the follow subject when submitting your EOI: *Name of the lead institution* – Gender and inclusion innovation research network.

The review process will consist of the following steps:

(1) Verification of eligibility requirements and expression of interest completeness: IDRC will review all submitted expressions of interest to ensure they meet eligibility requirements and all necessary materials. Incomplete expressions of interest or those that do not meet the requirements will not be considered further.

(2) Review and ranking of expressions of interest: IDRC staff will review eligible expressions of interest using the evaluation criteria. Each expression of interest will be reviewed by at least two reviewers. Expressions of interest will be ranked based on scoring and subsequent IDRC discussion.

(3) Shortlisting expressions of interest: On the basis of scoring and internal discussion, IDRC will shortlist high-quality expressions of interest and will invite them to submit a full proposal. The full proposals will be assessed by an external expert review panel, who will recommend a shortlist to IDRC and Sida.

(4) Proposal feedback will only be provided to those that are requested to submit a full proposal.

Call Timeline

Activity	Date
Expression of interest release date	April 29
Deadline for submission of questions	May 15
Answers to questions posted	May 18
Submission deadline	**May 30**
Selected EoIs invited to submit proposals	June 10
Submission of proposals	July 10
Final selection	July 25

Inquiries

If you have any questions about this call for expressions of interest, please contact IDRC at AI4DAfrica@idrc.ca. Any inquiries that affect all applicants will be posted anonymously online when the answers to questions are posted. Applicants are strongly encouraged to monitor this website (ai4d.ai) for any updates regarding the call.

Annex I. List of eligible countries

This lead organization must be headquartered in a low and lower-middle income countries in sub-Saharan Africa, as per the country classification of the World Bank[10]. Eligible countries include the following:

Angola	Malawi
Benin	Mali
Burkina Faso	Mauritania
Burundi	Mozambique
Cameroon	Niger
Central African Republic	Nigeria
Chad	Rwanda
Comoros	Senegal
Congo, Rep	Sierra Leone
Côte d'Ivoire	Somalia
Democratic Republic of the Congo	South Sudan
Djibouti	Sudan
Eritrea	Swaziland
Eswatini	Tanzania
Ethiopia	The Gambia
Ghana	Togo
Guinea	Uganda
Guinea-Bissau	Zambia
Kenya	Zimbabwe
Lesotho	
Liberia	
Madagascar	

The following SSA countries **are not** eligible for this call:

- Botswana
- Equatorial Guinea
- Gabon
- Namibia
- South Africa

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[10] https://datahelpdesk.worldbank.org/knowledgebase/articles/906519

- Seychelles