



# AIMS

African Institute for  
Mathematical Sciences

**NEXT EINSTEIN INITIATIVE**

## **AIMS-Carnegie Research Program in Data Science**

### **Call for Proposals: Final Evaluation**

#### **1. INTRODUCTION**

AIMS is the first and largest Pan-African network for the advancement of Science, Technology, Engineering and Mathematics (STEM), offering post-graduate training, research, and public outreach & engagement. AIMS was established in 2003 in Cape Town, South Africa and has since expanded across the continent with four additional Centres of Excellence in Senegal, Cameroon, Ghana, and Rwanda. The AIMS Master's in Mathematical Sciences is the network's flagship program, training hundreds of talented young Africans each year and supporting their transition to further study, research or employment. AIMS has proven to be a global leader in research in fundamental and applied sciences with three AIMS Research Centres across the network (including Research Chairs, Research Master's and PhD candidates, and Post-Doctoral Fellows) that collaborate closely with government, industry, and both local and international scientists.

With the support of the Carnegie Corporation of New York, AIMS launched a \$2.5 million research program in data science in 2018. The program sought to build research capacity and strengthen partnerships in data science in Africa.

The program objectives were:

1. To establish two research groups in Data Science and its Applications led by two appointed Research Chairs from the diaspora at AIMS Rwanda who will build the research capacity of AIMS Master's, PhD, and Post-Doctorate candidates and establish diverse and active international research partnerships
2. To establish a small research grant program in data science for African PhD students who are at an advanced stage of their research or African Postdoctoral Fellows seeking to establish firmly in an academic institution in Africa.
3. To increase engagement with eligible African mathematical scientists in the diaspora to serve as visiting lecturers for the AIMS Structured Master's program.
4. To strengthen the institutional capacity of the AIMS network.

The key activities of the program included:

- Appoint a Research Chair and Junior Research Chair in Data Science
- Train 7 PhD and 10 Research Master's Candidates
- Recruit three Post-Doctoral Fellows
- Develop data science courses for the AIMS Structured Master's curriculum
- Develop the *AIMS Doctoral Training Program in Data Science*
- Host 20 visiting scientists and organise other research visits, workshops and conferences in data science

AIMS is seeking an individual or small team of evaluators (2-3 people, max) to undertake an external and independent final evaluation of the *AIMS-Carnegie Research Program in Data Science*.

#### **2. OBJECTIVES OF THE FINAL EVALUATION**

The final evaluation is both an important learning and accountability exercise for AIMS and its partners to assess and document the evidence of impact and provide insight into the next phase of the program.

The objectives of the final evaluation include:

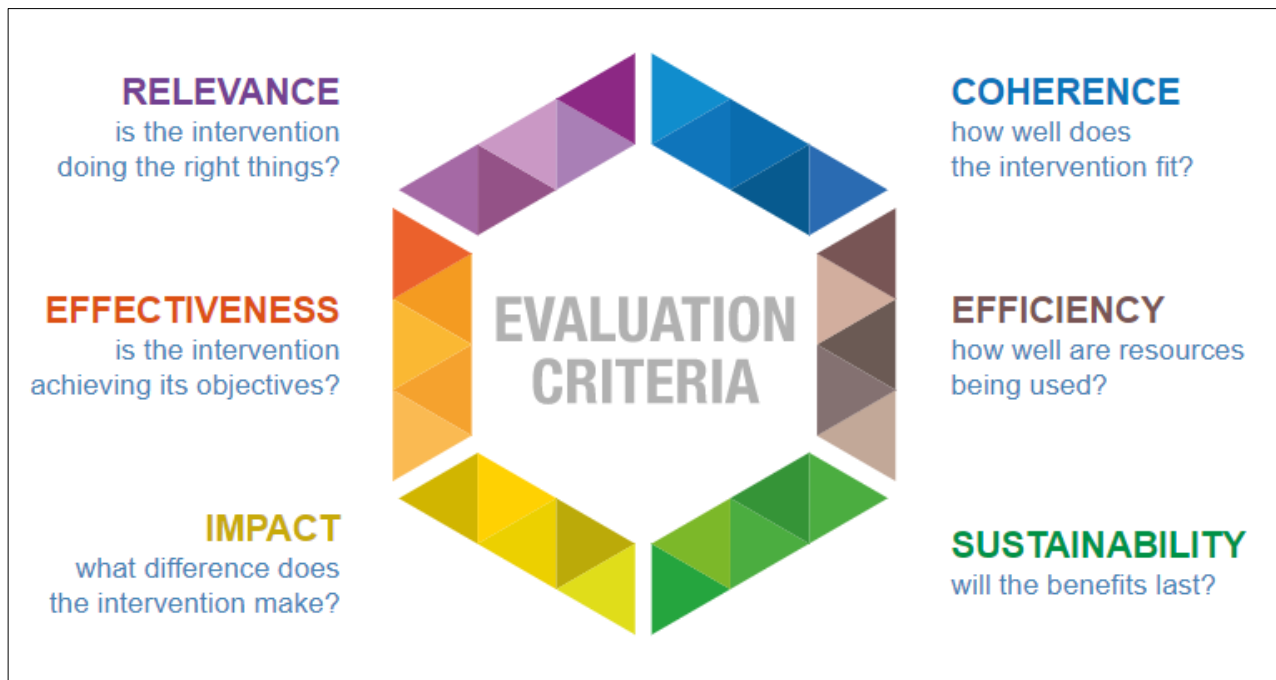
- To assess the results achieved by the *AIMS-Carnegie Research Program in Data Science*;
- To document the evidence of impact the program has had;



- To produce Stories of Impact for public dissemination; and
- To provide recommendations for the program's next phase.

### 3. EVALUATION CRITERIA

The OECD Development Cooperation Directorate has defined six evaluation criteria, which will provide a framework for this evaluation: relevance, coherence, effectiveness, efficiency, impact and sustainability<sup>1</sup>:



The questions below will guide the evaluation and will be further refined during the inception phase:

#### Relevance

- To what extent was the program relevant to the research and development priorities of Africa?
- Are the activities and outputs consistent with the objectives of the program?

#### Coherence

- To what extent was the program supported (or undermined) by other related initiatives at AIMS?
- To what extent was the program aligned with the AIMS 10-Year Strategic Plan and research activities across the network?
- To what extent were the program goals and objectives consistent or aligned with the broader research and development strategies and policies of Africa and Rwanda?
- To what extent was the program complementary or coordinated with other comparable initiatives in scientific research in Africa?

#### Effectiveness

- To what extent did the program achieve its objectives and intended results? What key factors *enabled* this? What key factors *hindered* this?
- Were the program activities implemented as planned?
- How effectively was the program managed?

#### Efficiency

- Was the program implemented in the most cost-efficient means possible?

<sup>1</sup> <https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>



- Do the results achieved reflect good value for money?
- How appropriate was the program delivery model?

### **Impact**

- To what extent has the program produced evidence of impact or significant change? What were the key contributing factors? What unintended changes did the program produce (both positive and negative)?

### **Sustainability**

- To what extent are the impacts from the program sustainable? To what extent will the benefits of the program continue following the end of the first phase?

*Considering the findings above, what lessons and recommendations can be drawn from the program for the next phase?*

## **4. PROPOSED APPROACH AND METHODOLOGY**

The assignment will require a variety of data collection and analysis tools and methodologies to ensure a comprehensive evaluation exercise. AIMS envisages the following key phases to the assignment:

- a) **Desk research/inception phase** to better understand the *AIMS-Carnegie Research Program in Data Science* within the context of the broader AIMS network. AIMS will share all relevant data, documents and reports with the selected consultant(s), including the proposal, grant agreement, annual work plans and budgets, and progress reports.
- b) **Data collection:** Interviews and surveys with stakeholders including AIMS staff, researchers, students, Carnegie representatives, and other partners.
- c) **Data analysis**
- d) **Report writing**
- e) **In-person Learning workshop** with AIMS and partners.

While this is the proposed approach to the assignment as envisaged by AIMS, applicants are invited to show innovation and creativity in their proposal and draw from their own experience and expertise, while ensuring alignment with the assignment's purpose and objectives.

## **5. SCOPE**

The assignment will focus exclusively on the AIMS-Carnegie Research Program in Data Science at AIMS Rwanda in Kigali from 2018 to present, within the broader Pan-African context of the AIMS network.

## **6. DELIVERABLES**

Below are the expected deliverables from this assignment to be further refined during the inception phase:

- a) **Inception Report** (5 pages max.) – The inception report will demonstrate the consultant's understanding and interpretation of the assignment and include a detailed approach, methodology, work plan, timeframe and budget for the assignment. It will also include a draft outline for the final evaluation report.
- b) **Draft Final Evaluation Report** (20 pages max.)
- c) **In-person Learning Workshop** (2 days) - The consultant(s) will design and facilitate a highly interactive and engaging in-person learning workshop where they will present their findings and conclusions from the evaluation. This will provide AIMS staff and partners an opportunity to reflect, discuss and validate the findings.



d) **Final Evaluation Report** (20 pages max.) – This will incorporate feedback from the Learning Workshop.

## 7. PROPOSED TIMELINE

The assignment is expected to take approximately 10 weeks as shown in the table below. However, the timeline will be reviewed and finalised during the inception phase.

Phase	Activity	Timeframe
<b>Inception</b>	<ul style="list-style-type: none"><li>• Desk research of key background documents</li><li>• Prepare Inception Report</li><li>• Hold an online Inception Meeting with a small team of AIMS staff to discuss the draft Inception Report and ensure alignment on the way forward</li></ul>	2 weeks
<b>Data collection</b>	<ul style="list-style-type: none"><li>• Interviews</li><li>• Surveys</li><li>• Further desk research</li></ul>	3 weeks
<b>Data Analysis and Report Writing</b>	<ul style="list-style-type: none"><li>• Synthesis and analysis of data/information</li><li>• Follow-up interviews where necessary</li><li>• Submit Draft Evaluation Report</li></ul>	2 weeks
<b>Learning Workshop, and Final Deliverables</b>	<ul style="list-style-type: none"><li>• Learning Workshop</li><li>• Incorporate feedback and submit the Final Evaluation Report.</li></ul>	3 weeks

## 8. OVERSIGHT OF THE ASSIGNMENT

The AIMS Director of Monitoring & Evaluation will be responsible for overseeing and managing the assignment including reviewing and approving all deliverables, with support from the Associate Director of Evaluation and Program Performance and the Director of Scientific Development and Administration. AIMS will provide all relevant program documents, reports, data, and contact information for key stakeholders. AIMS can provide support in making introductions or arranging interviews, as needed.

## 9. SELECTION CRITERIA

AIMS invites applications from individuals or small teams with relevant experience and expertise to undertake the assignment, as described above.

The key criteria for the selected consultant(s) includes:

- Extensive experience in undertaking evaluations. Preference will be given to those with practical experience in Africa and working in the context of higher education or research in STEM.
- Highly skilled and competent in program evaluation methodologies and approaches; data collection and analysis; and producing highly relevant and practical evaluation reports.
- Excellent organizational, analytical, and communication skills (verbal and written).
- Fluency in English (verbal and written).
- Working knowledge of French will be an added advantage.
- Preference will be given to African nationals.

## 10. SUBMISSION OF PROPOSAL

Applicants meeting the above criteria are invited to submit a written proposal to: [mel@nexteinstein.org](mailto:mel@nexteinstein.org) cc: [research@nexteinstein.org](mailto:research@nexteinstein.org) with the subject line: **AIMS-Carnegie Research Program Final Evaluation Proposal by 27 April 2023**. The proposal must not exceed ten (10) pages and must include the following:



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- **Technical Proposal** detailing how the consultant(s) meets the selection criteria above; understands and interprets the purpose and objectives of the assignment; their proposed approach and methodology; the consultant(s) unique added-value or comparative advantage; and a brief summary of past assignments of relevance.
- **Financial Proposal** detailing the breakdown of fees, including daily rates of payment per consultant, number of days for each consultant per phase, and any anticipated expenses (all in USD). *The budget must not exceed US \$30,000.*
- **CVs** of all proposed team members.
- Contact information for **two references** who can attest to the consultant(s) experience and expertise as it relates to this evaluation.
- **Two reports** of recently completed evaluations of a similar nature.

The Call for Proposals can also be found on the AIMS website [here](#). Any questions received will be answered and posted at this link, so please ensure to check back regularly.