



TERMS OF REFERENCE

Recruitment of a Consulting Firm or Group of Firms for the Training of Digital Transformation, Data Stewards, in the Data and Artificial Intelligence Developers under LeARN Program for Benin

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Tender Number	093/SA/RFP/ 05/2023
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Contacts	For any questions or enquiries, please write to: tenderenquiries@smartafrica.org For Proposal Submissions: procurement@smartafrica.org

I. Organization Background

Smart Africa is the materialization of a bold and innovative commitment by African Heads of State and Government to accelerate sustainable socio-economic development on the continent, bringing Africa into a knowledge economy through affordable access to technology. use of broadband and information and communication technologies.

The Smart Africa initiative aims to connect, innovate and transform the continent into a knowledge economy, thereby boosting global competitiveness and job creation. It participates in placing ICTs at the center of the national socio-economic development agenda of member countries, promoting the introduction of advanced technologies in telecommunications and leveraging ICTs to promote sustainable development.

II. The Smart Africa Digital Academy (SADA) Background

To do this, Smart Africa has aimed to support the development of digital skills. Thus, the Smart Africa Digital Academy (SADA). SADA was initiated as a lever for the implementation of capacity building and digital skills development activities. It is a pan-African dynamic learning ecosystem in which African citizens of all ages and social classes can acquire or improve their digital skills, acquire qualifications, meet the emerging talent needs of employers, the industry or be self-sufficient.

III. Context and Rationale

The period of COVID 19 has led to an exponential increase in digital uses. Uses such as teleworking, automated platforms and other innovative solutions have made it possible to maintain daily life activities ranging from financial issues to social issues, including health services, etc. While ensuring the continuity of services offered by public and private organizations, distance education, all these innovations have been able to integrate our habits and our daily lives. All these platforms and systems now impacting the way professionals work and the way of life of users challenges us on the need to make available qualified human resources capable of organizing and managing these new work environments and platforms resulting from this in monitoring, appropriation, uses. This will only be possible through continuity in training for a balanced development of technical and managerial capacities in the management of large-scale digital transformation projects in all sectors of activity.

The Smart Africa Secretariat and the Beninese Ministry of Digital and Digitalization are cooperating to implement digital skills development initiatives in the country through the Smart Africa Digital Academy program in Benin. This initiative results from the need to work to provide the Beninese ecosystem with a critical mass of competent human resources to fill the gap linked to the lack of local expertise for a successful digital transformation.

The Learning Lever for Digital Reconversion (LeARN) program initiated by the Ministry of Digital and Digitalization is part of this dynamic and aims to increase qualified resources in the digital sector in Benin. It is intended for anyone wishing to start a professionalization or retraining program in the digital professions and includes, in addition to theoretical and practical training, an immersion and pre-employment internship in a partner company to contribute by following a rapid professional integration.

A first experiment was able to be implemented and had concerned training in the professions of web developer and mobile developers for the benefit of forty (40) trainees who are now available on the Benin labor market, and professionally integrated.

This session will be carried out as part of the SADA (Smart Africa Digital Academy) program and will train candidates for career paths leading to the following professions:

Female candidates are strongly encouraged with quota requirements of:

Course 1: 25 Referents in digital transformation.

Course 2: 25 Data Steward.

Course 3: 25 Data and artificial intelligence developer

- A minimum of 60% women for course 1
- A minimum of 30% women for course 2
- A minimum of 30% women for course 3.

IV. Consultancy Objectives

The overall objective of the mission is to train seventy-five (75) young people in the following digital professions: (1) Referents in digital transformation, (2) Data Steward, and (3) Data and artificial intelligence developer.

The consultancy will meet the following specific objectives, namely:

- The design of a structured training plan (including curricula) that meets the needs of each of the identified business training modules (Digital Transformation Referents, Data Steward, and Data and Artificial Intelligence Developer).
- The proposal of selection test levels during the recruitment process and ensuring the management of the process;
- The provision of the skills necessary to understand the key concepts relating to each of the above professions;
- The provision of the skills necessary to master the practical tools allowing to exercise in each of the areas of competence related to the above-mentioned professions.
- Training in basic solutions relating to digital transformation in areas of expertise related to the trades:
 - Referents in digital transformation in companies and administrations, on the aspects:
 - Key concept skills related to marketing and corporate communication in the digital age;
 - Mastery of the processes of digitalization of digital environments, and associated solutions;
 - Basic solutions relating to digital transformation projects in companies and administrations.
 - Data Steward on the key aspects below:
 - The design, creation, and management of large databases (big data);
 - The manipulation of environments and tools adapted to the reception, storage, and transmission of data;
 - Mastery of data compliance verification processes;
 - Anonymization of data using software and all processes for limited use in a Proof-of-Concept phase, before using real data in an industrialized application.
 - Mastery of data quality verification procedures and knowledge of all bias issues that can disrupt AI systems.
 - The design and operationalization of data governance strategies and policies.
 - Data mapping.
 - Securing data against internal and external threats, about storage and transport issues and regarding cybersecurity.
 - Training in mastering all the contours related to the management and monitoring of data projects.

- Training related to the mastery of data inventory techniques.
- The development of culture and reflexes related to the safety of related environments.
- Certification of trainees to relevant and corresponding industry standards.
- Training in skills and behaviors in business, including the relationship with the CIO and AI project managers while paying great attention to user needs.
- Efficiency, time management and a cooperative and operational spirit in an IT team or an organization's digital transformation.
- The great versatility to integrate IT teams and AI projects by being a force of proposals very useful for collective performance.
- Data and artificial intelligence developer on the key aspects below:
 - Deep Learning, including various neural networks for supervised and unsupervised learning.
 - The different types of deep architectures, including convolutional networks, recurrent networks, and auto-encoders.
 - The cases of applications of Deep Learning to real-world scenarios (Object recognition and computer vision, image and video processing, text analysis, natural language processing, recommender systems and other types of classifiers).
 - Use of popular learning libraries.
 - The creation and design of predictive applications based on AI.
 - The development of technological solutions based on AI (customer interaction solutions, chatbot, design and testing of tools).
 - Translating and manipulating mass data (Big Data): extraction, collection and monitoring;
 - Data analysis and reporting for the creation of Artificial Intelligence programs.
 - Training in mastering all the contours related to the management and monitoring of digital transformation projects based on artificial intelligence and big data.
 - The training will include an important use of GPT3 which is an educational tool but can also help in the creation of code bricks in python.
- Training for an ability to raise awareness of human and financial resources and follow-up by project schedule with a view to supporting change management for users.
- Develop the culture and reflexes related to the security of digital work environments.
- Training in business skills and behaviors.
- Training in the basics of individual entrepreneurship in Benin.
- Training in efficiency, time management and leadership.

V. Expected Courses and Deliverables

The training firm must offer modules to support learners in developing skills related to the professions of Referents in digital transformation, Data Steward, and Data and artificial intelligence developer.

- a. On the Referents in digital transformation component, content should be offered to support learners in developing skills for supporting companies, in particular SMEs / VSEs on multiple skills for (1) website creation (2) creation solutions of digital solutions (3) digital marketing and the development of the image of a brand on the internet (4) referencing (5) cybersecurity, etc.
- b. On the Data Steward component (Data Coordinator), support content should be offered, learners to develop skills for support of companies and organizations, on multiple skills oriented on (1) the importance and types of data in modern organizations (2) the logic of collecting, storing, analyzing and protecting data (3) Data provisioning in Machine Learning (4) data visualization based on Big Data (5) the processing of massive data with the most used and adapted tools (6) the techniques of data mining and data mining (7) programming with big data and mastery of all production environments (8) data security and protection of organization secrets and individual data.
- c. On the Data and artificial intelligence developer component, content should be offered to support learners to develop skills for support for companies and organizations, on multiple skills oriented on (1) Deep Learning (2) Machine Learning (3) Python programming including using a code generator like GPT3 (4) designing and developing UI components (5) mastering data persistence techniques (6) predictive programming / Artificial Intelligence (AI) (8) techniques for securing data in operation (9) construction of POCs, particularly in the field of automated language processing and in image

processing systems (10) teaching data security and compliance with protection regulations personal data.

In addition to the content provided, the following requirements will be expected from the firm:

- Each of the training courses will be sanctioned by a certificate of completion.
- The training ends with a pre-employment internship in a company which must last at least three (03) months and up to six (06) months.
- Beyond the theoretical concepts introduced at the start of the course, the training will be mainly based on practical case studies.

VI. Preparation for Professional Integration

At the end of this intensive training, the participant is ready to put their new skills to good use with a company. To best help each participant, the training will also include **additional modules** of:

- **Project management** oriented towards the specific professions concerned: course on project management, agile methodologies.
- **Collaboration with the actors of the ecosystems concerned:** group work, team building events.
- **English oriented to the context of each profession concerned:** refresher course, technical English courses.
- **Professionalization:**
 - Meeting with professionals and company visits.
 - Job search techniques.
 - Coaching sessions.
 - Job interviews with partner companies.
 - Individual entrepreneurship.

VII. Outlets and Possible Opportunities

This training should allow trainees to lead and/or obtain opportunities in the following professions:

a. Concerning the Referent course in digital transformation:

- Referent / digital mediator
- Webmaster
- Digital project manager
- Community Manager
- Project Manager and Web Applications.

NB: The resulting skills may be attracted by: (1) Mobile telephone operators (2) Public administration and international institutions (3) Digital agencies for the development of products and services. (4) Any public or private company wishing to improve its digital communication.

b. Regarding the Data Steward course:

- Team member in AI with responsibility for data and supporting data scientists or IT managers,
- Contributor on data intelligence projects to enhance data.
- Versatile Data Steward knowing how to protect and enhance data.
- Specialist in data protection and legal aspects of data in connection with a legal department and data steward.
- Specialized in data visualization.
- Expert in encryption and decryption of sensitive data.

NB: The resulting skills may be attracted by: (1) Mobile telephone operators (2) Public administration and international institutions (3) Digital agencies for the development of products and services. (4) Any public or private company wishing to enhance their data and set up a DataLab.

c. About the Data Steward path

- AI Application Architect,
- Data Project Manager,
- data analyst,
- Data Architect.

The resulting skills may be brought into the following organizations: (1) Development company for digital products and services (2) Multi-sector SMEs (3) Public administration; government agencies, international institutions (4) Digital agencies developing products and services using artificial intelligence (5) Training organizations wishing to develop artificial intelligence teaching departments.

VIII. Desired Work Scope

The scope of this consultation is around the following points:

- Preparation and provision of a structured training plan and schedule for each of the following training paths: Digital Transformation Referents, Data Steward, and Data and Artificial Intelligence Developer over periods of twelve (12) weeks respectively at maximum, six (06) months in alternating mode at most, and twelve (12) weeks minimum. This agenda will be validated at the scoping meeting for this consultation mission by the Ministry of Digital and Digitalization, which must receive a copy beforehand.
- Provide evidence of the availability of qualified trainers capable of providing training on each module mentioned.
- Demonstrate the availability and ability to provide logistics related to the transport of trainers to the chosen training location (including transport / accommodation costs, travel authorizations, health obligations, etc.) if applicable.
- Ensure the availability of suitable rooms and environments for holding the training.
- Provide training in accordance with the timetable validated at the framing meeting.
- Ensure adequate assistance for the entire procedure for selecting trainees and ensure follow-up by register of the latter.
- Make approved certificates available to successful candidates at the end of each training session.
- Design and make available the materials (content) of each training module to trainees while integrating it into an online learning platform.
- Coordinate the final review process for candidates.
- Provide a training report for each session according to a pre-established outline and a general report to be submitted for the approval of the Ministry of Digital and Digitalization.
- Coordinate the whole process with the designated focal points of the Ministry of Digital and Digitization.
- Provide remote workshops using video devices conferences also allowing the meeting of trainers located in several European countries or in the world.

IX. Expected Results

The expected results are the successful completion of the various courses, a 100% success rate in exams and level tests designed and/or recommended by the training provider.

X. Guidelines on Desired Profiles for Candidates that will be trained in Digital Transformation, Data Stewards, in the Data and Artificial Intelligence Developers under LeARN

This training within the framework of the LeARN program is open to any young Beninese in search of training and professional integration in the digital field. The Ministry of Digital and Digitalization will launch a mass call for applicants and the recruited firm will select the qualified candidates from the following criteria:

A. Regarding the Referent course in digital transformation:

- Be between 18 and 35 years old.
- Have at least a BAC level or justify five (05) years of professional experience after the BEPC, regardless of the sector.
- Have an appreciable knowledge of English.
- Similarly, knowledge of computers would be an asset.
- Have a good logical mind.
- To be motivated.
- Have a professional project or an idea of professional retraining in a digital profession.
- Be available full-time for the duration of the training.

B. Regarding the Data Steward Journey:

- Be between 18 and 40 years old.
- Have the minimum BAC + 2 diploma in mathematics or computer science or equivalent or justify five (05) years of professional experience after the BAC.
- Or self-taught with a level of knowledge and programming skills in Python, with at least one reference from a POC (Proof of Concept).
- Have knowledge of data storage in the cloud.
- Can load the data while minimizing the risk and having all the steps validated by an IT Director or an authority.
- Have basic knowledge of the operation of database management systems.
- Have an appreciable knowledge of English.
- Have a good logical mind and excellent morality.
- Have read Benin's national AI strategy, be motivated by artificial intelligence and all the issues of data production, protection, and enhancement.
- Have a professional project or an idea of professional retraining in a digital and artificial intelligence profession.
- Be available full-time for the duration of the training.

C. Regarding the Data and Artificial Intelligence Developer course:

- Be between 18 and 40 years old.
- Have the minimum BAC + 2 diploma in mathematics or computer science or equivalent or justify five (05) years of professional experience after the BAC.
- Or self-taught with a level of knowledge and programming skills in Python, with at least one reference from a POC (Proof of Concept).
- Have knowledge of data storage in the cloud.
- Can load the data while minimizing the risk and having all the steps validated by an IT Director or an authority.
- Have basic knowledge of the operation of database management systems.
- Have an appreciable knowledge of English.
- Have a good logical mind and excellent morality.
- Have read Benin's national AI strategy, be motivated by artificial intelligence and all the issues of data production, protection, and enhancement.
- Have a professional project or an idea of professional retraining in a digital and artificial intelligence profession.
- Be available full-time for the duration of the training.

NB: These basic criteria can be revised or adapted. They must be specified in the content of the technical offer on the methodology part.

XI. Duration of Sessions and Training Methodology

The recommended training method for this assignment is a face-to-face approach, with standard training materials to be developed and delivered in an online module pack (Digital).

The recommended module pack should contain the following:

- Learning material (Courseware Book) including:
- Detailed standardized learning material developed by the content provider to guide the candidate through the training period.
- Quick Reference Guide comprising representing a Learning Kit summary of standardized content developed by the content provider as a test preparation tool.
- Identification and online learning platform that will be used to make the course modules available, with a transfer of hosting and administration to the Ministry at the end of the training, the idea being that the platform remain online indefinitely.
- A copy of said training content will be made in the SADA Platform of Smart Africa.
- If necessary, international level platforms can be recommended to the beneficiaries of the training.

XII. Mission Execution

The implementation will be done according to a contractual framework to be defined between the Smart Africa Secretariat, and the recruited firm.

XIII. Consulting firms Profile and Experience.

The firm sought can be a company or a group of companies.

The selected firm must meet the following requirements:

- proven experience in capacity building and training in the field of Information and Communication Technologies (ICT)
- Have at least one (01) certified trainer in the desired expertise mentioned above.
- Demonstrate the ability and experience required to provide training that meets the objectives described above.
- Demonstrate the ability to dispose of the elements technical and strategic for capacity building, including the infrastructure to deliver the training.
- Demonstrate at least two (02) similar experiences in the last (5 years).

The mission must be carried out by qualified consultants/experts in each of the courses requested, as well as the specialties of the modules listed, namely:

- **The Lead Consultant / Head of Mission**
- Diploma of at least BAC+5 in one or more of the following fields: computer science, information technology, capacity building, digital education, economics, data management or governance, and project management, software development, computer security and telecommunications, or related fields.
- Have at least five (05) years of experience in capacity building in one of the areas concerned by the mission.
- Hold a certification in one of the fields concerned by the mission.
- Have participated in at least two (02) similar projects related to the fields concerned by the mission during the last three years.
- Experience in program leadership, governance and activating change.

- **Three (03) Lead Trainers, For each Lead Trainer**
 - Have at least a master's degree in one or more of the fields specific to the course concerned (Referent in digital transformation, Data Steward, Data Developer and artificial intelligence).
 - Be recognized as a trainer in the field of the program concerning him for this mission.
 - Have at least five (5) years of experience in the field of the course concerning him for this mission.
 - Have solid experience in conducting training for young people or adults.
- **Trainers (depending on the number of modules for each course). Each trainer selected for a given module must:**
 - Have a university degree with at least a bachelor's or master's degree in computer science, telecommunications or an area of information and communication technologies (ICT).
 - Have a relevant professional certification in the field in question.
 - Have trained and certified professional groups of candidates within the last three (3) years.
 - A trainer can provide training on one (01) or more modules.

XIV. Evaluation Method and Criteria

All bidders should note that the method of evaluation is Cost Quality Based Selection (QCBS) for consultants. The technical and financial scores are respectively 0.8 and 0.2 (0.8 + 0.2=1).

The following template will be used to evaluate all offers received:

a) Technical Evaluation Criteria

Details	Point Score
Methodology and work plan	
i. Proposed methodology and approach 15	/30
ii. Workplan and timelines 15	
Experience of the firm or group of firms	
• Number of years of experience for the consulting firm delivering similar trainings	/30
i. More than 10 years 30	
ii. Between 5 and 10 years 25	
iii. Under 5 years 5	
Experience of Experts	
Lead Consultant / Head of Mission:	/15
i. More than 5 years 15	
ii. Between 2 and 5 years 10	
iii. Less than 2 years 5	
Lead Trainers (Each Trainer score and divide by 3):	/15
i. More than 5 years 15	
ii. Between 2 and 5 years 10	
iii. Less than 2 years 5	
Trainers (Count for each trainer and average):	/10
i. More than 4 trainers per course 10	
ii. Between 2 and 4 trainers per course 5	
iii. Less than 2 trainers per course	

The financial proposals of bidders who have obtained a minimum score of 70/100 in the technical evaluation will be opened.

St= Score for the technical evaluation.

b) Financial Evaluation Criteria

Once the technical criteria have been evaluated, the costs of all financial offers will be ranked from lowest to highest. The calculation of the cost criteria score will be done using the following formula:

$$\frac{\text{Lowest cost of all the proposals}}{\text{Cost of firm's price offer}} \times 100 = \text{Financial Score} = F_s$$

The candidate obtaining maximum marks on a weighting of 80 to 20 (80% for the technical aspects and 20% for the financial aspects) will be retained.

The weightings attributed to the Technical (T) and Financial (F) Proposals are respectively: T = 0.80 and F = 0.20

The final grade (S) is calculated as follows: $S = St * T + Sf * F$

XV. Submission Requirements for Technical & Financial Proposals

A specific outline must be followed to facilitate the Smart Africa Secretariat's review and evaluation of the responses received.

A response to this RFP must include the following sections in the order listed:

- i) A cover letter confirming the firm's interest to provide the services required.
- ii) Mandatory Administrative documents
 - Company registration certificate
 - Tax registration and clearance certificates
 - Membership and Accreditation Certificates for the consulting firms/firms
- iii) A technical proposal containing the following content:
 - Executive summary
 - Business experience/Profiles
 - Approach and Methodology
 - Work Plan / Schedule
 - Mission team experience/profiles
 - Updated Curriculum Vitae for the team and academic certificates required.
 - Company/Firm Certificates or Recommendation letters of successful completion for similar past assignments, duly signed and stamped.
- iv) Financial Proposal containing the following tables.
 - Summary of Costs.
 - Breakdown of price per user group.
 - Breakdown of remuneration user group on daily rate.
 - Reimbursable expenses user group applicable.
 - Miscellaneous Expenses if any

Notes:

- i. Indicate your preferred payment terms under financial proposal.
- ii. A withholding tax of 15% will be deducted from payments for Firms not VAT-registered with Rwanda Tax Administration (RRA) and 18% VAT will be applicable for registered firms in Rwanda.

- iii. *All Financial Proposals/offers should be password protected and Smart Africa will request for it for bidders who have been qualified in the technical evaluation.*
- iv. *All Financial Offers should be quoted and submitted in USD Currency.*

XVI. Submission Process

Soft copies of both Technical and financial proposals must be sent to: procurement@smartafrica.org showing each the nature of the offer concerned (technical or financial offer), not later than **12th June 2023** at, 5:00 PM local time (Kigali), addressed to Procurement Office of Smart Africa Secretariat, with subject marked: **093/SA-GIZ-SADA/RFP/05/2023: Recruitment of a contractor for the Training of Digital Transformation, Data Stewards, in the Data and Artificial Intelligence Developers.**

XVII. Rights Reserved

- a) This RFP does not obligate the Smart Africa Secretariat (SAS) to complete the RFP process. SAS reserves the right to amend any segment of the RFP prior to the announcement of a selected firm.
- b) SAS also reserves the right to remove one or more of the services from consideration for this contract should the evaluation show that it is in SAS's best interest to do so.
- c) SAS also may, at its discretion, issue a separate contract for any service or groups of services included in this RFP. SAS may negotiate a compensation package and additional provisions to the contract awarded under this RFP.
- d) The Smart Africa reserves the right to debrief the applicants after the completion of the process due to expected high volume of applications and avoiding the compromise of the process.

Late proposals will be rejected.

XVIII. Validity

Proposals and quotes must remain valid for 180 days after the date of closing noted above. After, the closing date and time, all proposals received by the Smart Africa Secretariat become its property.

XIX. Enquiries

Any inquiries will only be received at least 5 working days before the bid submission deadline. Prospective respondents who may have questions regarding this RFP may submit their inquiries to tenderenquiries@smartafrica.org

XX. Anti-Corruption

Smart Africa is committed to preventing and not tolerating any act of corruption and other malpractices and expects that all bidders will adhere to the same ethical principles.