



REPUBLIC OF KENYA



**COUNTRY: KENYA**  
**PROJECT: KENYA DIGITAL ECONOMY ACCELERATION PROJECT (KDEAP)**  
**IMPLEMENTING AGENCY: Information and Communications Technology Authority (ICTA)**

**PROJECT ID: P170941; Credit Numbers 7289-KE and 7290-KE**

**TERMS OF REFERENCE FOR:**

**REQUEST FOR EXPRESSION OF INTEREST**

**FOR**

**FEASIBILITY STUDY FOR MANAGING OF E-WASTE  
(Consulting Firm)**

**Contract No: KE-ICTA-392791-CS-QCBS**

**Issue Date: 12<sup>th</sup> November 2024**

**Closing Date: 27<sup>th</sup> November 2024**

**Client:**

The Chief Executive Officer,  
ICT Authority  
Telposta Towers 12<sup>th</sup> Floor, Kenyatta Ave  
PO Box 27150 - 00100 Nairobi Kenya  
Tel: +254 20 2089061/ 2211960 Fax: +254 20 2211960  
Email: [procurement@ict.go.ke](mailto:procurement@ict.go.ke) , [info@icta.go.ke](mailto:info@icta.go.ke)  
Website: [www.icta.go.ke](http://www.icta.go.ke)

## FEASIBILITY STUDY FOR MANAGING E-WASTE

### 1. Background

The Government of the Republic of Kenya (GoK) has received credit financing in the amount equivalent to US\$390 Million from the World Bank towards the cost of the first phase of the Kenya Digital Economy Acceleration Project (thereafter “Project”) and intends to apply part of the proceeds to pay for goods, works, non-consulting services and consulting services to be procured under the Project.

The project includes the following components.

**Component 1: Digital Infrastructure and Access.** The aim of this component is to increase access to high-speed internet for individuals, industry, and government—the ‘foundation of the foundations’ of a digital economy—and strengthen Kenya’s role as regional digital leader, while leveraging investments from the private sector.

**Component 2. Digital Government and Services.** This component will invest in the foundational digital services, platforms, architectures, and policies needed to transform the way the Government communicates and conducts its internal operations.

**Component 3. Digital Skills and Markets.** This component aims to equip young Kenyans with digital skills and strengthen their abilities to access and compete in domestic and regional markets, to study mechanisms to improve access to affordable devices and through enhancing the enabling environment for e-commerce to support Kenya’s role as a regional digital hub.

**Component 4. Project Management.** This component will support project implementation, coordination, and capacity building for the Project Implementation Unit (PIU) within the Information and Communications Technology Authority (ICTA).

**Component 5: Contingent Emergency Response Component.** This component will be activated in the event of an emergency.

The GoK intends to apply a portion of the proceeds of the Credit to cover activities under *Component 2.2 (C) III (d) to conduct a feasibility study for managing eWaste within the public and private sector in Kenya, develop an e-waste Implementation strategy-roadmap and operational guideline to effectively manage e-waste and mitigate its environmental and health impacts with a view towards circular economy.*

The ICT sector contributes to the economic growth of the country in terms of generation of employment, GDP increase, and earnings from foreign exchange. With rapid with Rapid Change in technology and more digitalization in the world, there is an explosive growth in electronics industry and subsequently that has led to enormous growth in electronic waste (e-waste). E-waste contains many hazardous and toxic substances which have serious health and environmental effects, if not managed properly

The effective management of electronic waste (eWaste) necessitates collaborative efforts between the Information and Communication Technology Authority (ICTA) and environmental regulatory bodies. This cross-sectoral challenge demands an

interdisciplinary approach, facilitated by mechanisms such as joint research, task forces, and policy coherence. Currently ICTA and NEMA are collaborating in Africa Environmental Health and Pollution Management project where ICTA is part of the Technical Advisory Committee and a key stakeholder.

According to the Global E-waste Monitor, 2020: Quantities, flows and the circular economy potential, a record 53.6 million metric tonnes (Mt) of electronic waste was generated worldwide in 2019, up 21 per cent in just five years. The report also predicts global eWaste – discarded products with a battery or plug – will reach 74 Mt by 2030, almost a doubling of e-waste in just 16 years. This makes E-waste is now the world's fastest-growing waste stream. Only 17.4 percent of 2019's e-waste was collected and recycled.

The World Economic Forum reported an estimated waste stream of 48.5 million metric tons in 2018 and an estimated generated tonnage of 61 million by 2023. The increase in generation of E-waste is the result of the short replacement cycles of ICT devices such as mobile devices due to various reasons such as personal lifestyle and the need to replace as well as technological advancements. There is need to integrate appropriate mechanisms for safe e-waste disposal management and recycling to ensure safety of persons and sustainability of the environment. It is against this background that the East Africa Community Organization(EACO) has developed a five-year strategic plan to curb the rapid accumulation of e-waste across EACO member states.

The ICT Authority is committed to the realization of sustainable management of eWaste in the Country towards achieving a circular economy. The Authority is therefore inviting proposals from reputable companies to undertake a feasibility study eWaste Management.

## **2. Objectives of the Assignment**

The objective of this feasibility study to assess the viability and effectiveness of implementing an integrated system for managing electronic waste in Kenya. This involves evaluating various aspects, including infrastructure (Plant/Factory), technical, economic, environmental, and social dimensions to ensure that the proposed e-waste management solutions that are practical, sustainable and beneficial to all stakeholders involved and the citizens.

## **3. Scope and Specific Tasks of the Assignment**

### **3.1 Scope**

The scope of the work shall encompass all aspects of and apply a life-cycle perspective to electrical and electronic equipment, including the production, usage, repair, refurbishment, waste collection, magnitude of eWaste, dismantling, recycling practices and final disposal of all types of devices that are wired or run on batteries.

### 3.1 Specific Tasks of the Assignment

The Consultant shall organize its work to undertake the following main functions and responsibilities, taking into account relevant interagency and intergovernmental processes. This assignment will cover all 47 counties in Kenya.

#### **3.1 Current Status Assessment:**

- a) Review existing policies, regulations, and frameworks related to e-waste management at the national and institutional levels.
- b) Map existing initiatives carried out by public sector agencies, private sector, informal sector and current practices on eWaste disposal.
- c) Gather information on existing standards, guidelines and best practices on sustainable production and consumption of electrical and electronic equipment and the environmentally sound management of e-waste approaches, including those carried across the private sector organizations
- d) Assess the magnitude of ewaste, infrastructure, facilities and resources available for e-waste collection, segregation and disposal in government institutions.
- e) Evaluate the current e-waste management practices, including recycling, treatment, and disposal methods, in accordance with environmental and health standards.
- f) Evaluate the current collaborations towards ewaste management funding mechanisms for sustainable e-waste management initiatives including ICT Extended producer responsibility(EPR) and producer responsibility organization(PRO).
- g) Analyse the data on e-waste generation (sources) and its composition in government institutions and the country as well as categorization of ewaste.
- h) Define the overall objectives of the e-waste management strategy, considering environmental protection, resource recovery, public health, and sustainable development. Establish measurable targets and timelines for e-waste collection, recycling, and disposal.
- i) Provide an in-depth comparative analysis of the current eWaste status based on various eWaste generation streams, current eWaste management initiatives, provide data based eWaste projection for the next 5years to enable proper planning for the Country.

#### **3.2 Policy and legal frameworks for eWaste**

Identify and assess the existing legislation, policies, and regulations related to e-waste management in Kenya. Propose any necessary amendments or new regulations to address gaps and improve the effectiveness of e-waste management.

#### **3.3 Environmental and Health Impact Assessment:**

- a) Assess the environmental and health risks associated with improper e-waste management.
- b) Identify potential sources of pollution and contamination from e-waste.
- c) Analyse the impact of e-waste on air, water, and soil quality, as well as human health.

### **3.4 Stakeholder Engagement:**

- a) Identify relevant government institutions, regulatory bodies, and other stakeholders involved in e-waste management.
- b) Conduct interviews, workshops, and surveys to gather information and understand the perspectives of stakeholders.
- c) Develop a public-private eWaste partnership framework

### **3.5 Strategy and Operational Guideline Development:**

- a) To develop a comprehensive strategy for managing e-waste in government institutions and the country, considering international best practices and standards.
- b) Define the appropriate collection, segregation, recycling, treatment, and disposal methods.
- c) Determine roles and responsibilities of relevant stakeholders in implementing the strategy.
- d) Establish guidelines for awareness campaigns, capacity building, and training programs.
- e) Develop a framework for monitoring, evaluating, and reporting on the progress of e-waste management initiatives

### **3.6 Recommendations and Implementation Plan:**

- a) Provide recommendations for policy reforms, legal frameworks, and institutional arrangements to enhance e-waste management in government institutions and the country, consider the implementation and enforcement mechanisms required for the proposed regulations
- b) Strategies on promoting employment creation, including transition from the informal to the formal economy and safety and health in the management of e-waste
- c) Promoting the implementation of existing international standards for the management of e-waste;
- d) Performing necessary research to have a better understanding of the quantification and qualification of many unknown aspects associated with e- waste and to support a solid basis for policy design and decision making;
- e) Prepare a report on glossary that clarifies the main terms and concepts related to e-waste with the objective to support a common understanding of these terms and to facilitate cooperation between all stakeholders with a view to finding.
- f) Develop a financing strategy for the ICT Authority to manage eWaste in the country including funding for coordination mechanism on sustainable production, consumption and final disposal of electrical and electronic equipment with the aim to maximize system-wide coordinated action and coherence; provide more visibility to all engaged players; avoid the impression of non-concerted action.
- g) Recommend a sustainable eWaste Capacity building plan and skills development strategy, implementation plan with clear timelines, milestones, and resource requirements.
- i) Develop a system-wide approach and a related strategy for implementation within the public sector MCDAs system to address the global e-waste challenge. The implementation of the strategy will include, among others, coordinated approaches for:

- ii) Increase effectiveness of the support provided to Public and Private sector individuals and organizations in their efforts towards achieving the time-bound goals, targets and actions related to its scope of work as agreed by the international community, particularly those items contained in the Sustainable Development Goals;
- iii) Raising awareness to the public (citizens) of the growing problems associated with e-waste across the globe; guiding public and private sector on transition teething technological, socio-economic and policy problems associated with e-waste recycling in their formal and informal economies;
- iv) Develop sustainable training programmes for public and private stakeholders, academia on health, societal, and environmental problems that arise due to the unsound management of e-waste and highlighting feasible frameworks for establishing a professionalized e-waste recycling system;

#### 4.0 Duration and Location of Assignment

The assignment will be for a period of **Ten (10) Calendar Months from contract commencement date** . The proposed timeline includes the time gap in between relevant meetings between the consultant and stakeholders; as well as time that may be required for the client (ICTA) to review the output for approval purposes.

#### 5.0 Reporting Requirements and Timeline for Deliverables:

The consultant will present the following reports:

Table 1: **Task Deliverables and Timeline**

OUTPUTS/ DELIVERABLES	DESCRIPTION	TIMELINE FOR SUBMISSION OF DELIVERABLES AFTER CONTRACT COMMENCEMENT	FORMAT OF PRESENTATION
Inception Report	The Consultant will share the detailed approach, a work plan, milestones sources of information, staffing and working arrangements necessary to complete the assignment. The inception report should cover data for fieldwork so that ICTA and beneficiaries may join. The work plan should anticipate risks and propose mitigation measures.	1 Month	4 Hard copies and 1 digital copy

Current eWaste Status Report	Comprehensive report on the current status of e-waste management in government institutions and the country.	3 Months	4 Hard copies and 1 digital copy
Environmental and health Impact Assessment Report	An environmental and health impact assessment report.	5 Months	4 Hard copies and 1 digital copy
EWaste Operational Guideline/Manual Report	Provide a strategy and operational guideline document for e-waste management.	7 Months	4 Hard copies and 1 digital copy
eWaste Policy Framework	Review and Recommendations for policy reforms, legal frameworks, and institutional arrangements.	8 Months	4 Hard copies and 1 digital copy
Final Report (eWaste National Implementation Plan)	A report that guides on the implementation plan with timelines, milestones, and resources required.	10 Months	4 Hard copies and 1 digital copy

All draft and final reports (1 original hard copy and 3 hard copy and a digital copy) shall be submitted in the prescribed format to:

The Chief Executive Officer,  
ICT Authority  
Telpost Towers 12<sup>th</sup> Floor, Kenyatta Ave  
PO Box 27150 – 00100  
Nairobi Kenya  
Tel: +254 20 2089061/ 2211960 Fax: +254 20 2211960  
Email: [procurement@ict.go.ke](mailto:procurement@ict.go.ke) , [info@icta.go.ke](mailto:info@icta.go.ke)  
Website: [www.icta.go.ke](http://www.icta.go.ke)

Attention:  
The Project Coordinator  
KDEAP

Upon submission of every report, the consultant is expected to make a presentation of the submitted report to the Client in a scheduled meeting. The acceptance of the report shall be recorded in the minutes of the meeting

## 6.0 Payment Schedule

The proposed payment schedules based on satisfactory performance by the consultant will be as shown in Table 2 below.

**Table 2: Proposed payment schedule**

S/No.	Deliverables	Timelines after contract commencement	Percentage of the contract amount
1.	Submission and Acceptance of Inception report	1 month	10%
2.	Submission and Acceptance of Current eWaste Status report	3 Months	20%
3.	Submission and Acceptance of Environmental and health Impact Assessment Report	5 Months	20%
4.	Submission and Acceptance of eWaste Operational Guideline/Manual Report	7 Months	20%
5.	Submission and Acceptance of eWaste Policy Framework	8 Months	20%
6.	Submission and Acceptance of Final Report (eWaste National Implementation Plan)	10 Months	10%

Upon submission of every report, the consultant is expected to make a presentation of the submitted report to the Client and the ICT Authority in a scheduled meeting. The acceptance of the report shall be recorded in the minutes of the meeting.

### 7.0 Minimum requirements for consultant's qualifications and experience

The shortlisting criteria for the Consulting Firm will involve the following:

- a) **Core business and years in business:** The firm shall be registered/incorporated as a consulting firm with core business in providing consulting services on E-waste management, digital access advisory and research or related services for a period of at least five (5) years.
- b) **Relevant experience:** The firm shall demonstrate as having successfully executed and completed at least two (2) assignments in reviewing and advising on laws, regulations and policy environments concerning the ICT sector and eWaste Management in the last five (5) years . Provide particulars of the assignments (name and address of the client, scope, value, and period).
- c) **Technical and managerial capability of the firm:** The firm shall demonstrate having the requisite technical and managerial capacity to undertake the assignment. **Key experts shall not be evaluated at shortlisting stage.**

### 8.0 Team composition and minimum qualification and experience requirements for the key experts

The Consultants shall demonstrate well qualified and experienced professionals as required and appropriate for execution of the assignment. The Consultants will be required to have a multi-disciplinary team including legal, research, policy and regulatory and technology experts. They should possess necessary tools and resources to undertake the assignment of such nature. The key professionals/expert shall



personally carry out (with assistance of other non-key experts and staff deemed appropriate) the services as described in this TOR. The key experts to be provided by the Consultants for this assignment are as follows: -

Table 3: Team composition and minimum qualification

No.	Key Expert
1.	<p><b>Lead Consultant:</b></p> <ul style="list-style-type: none"> <li>a) A minimum of Master's degree in Environmental Science from a recognized University.</li> <li>b) A Minimum of ten (10) years' general experience on areas such as environment, economics, business development, ewaste management or related social science field.</li> <li>c) A minimum of five (5) years of working experience with Government or private sector or similar organization in research ,policies and legislation.</li> <li>d) Should have project management certifications such as – Project Prince 2 Agile or PMP.</li> </ul>
2.	<p><b>2.1 Researcher</b></p> <ul style="list-style-type: none"> <li>a) A minimum of Bachelor's degree in environmental management or economics, environment engineering, environmental science, waste management, circular economy, or related field is required</li> <li>b) A minimum of eight (8) years of general work experience in the field of ewaste management, circular economy, recycling, and/or environmental management.</li> <li>c) A minimum of five (5) years of specific experience working with international organisations is preferred and Experience in identifying opportunities for innovation and knowledge sharing in the field of e-waste management.</li> </ul>
3.	<p><b>2.1 Environmental Expert:</b></p> <ul style="list-style-type: none"> <li>a) A minimum of Master's degree in environmental science, environmental engineering, or a related field.</li> <li>b) A minimum of 5 years of general professional experience in e-waste management.</li> <li>c) A minimum of three (3) years of specific experience in conducting environmental impact assessments and risk assessments of the environmental impacts associated with e-waste and hazardous substances.</li> </ul>
4.	<p><b>2.3 Policy Analyst:</b></p> <ul style="list-style-type: none"> <li>a) A minimum of Master's degree in public policy, environmental policy, or a related field.</li> <li>b) A minimum of five (5) years of general experience in developing eWaste management policies and framework. Provide evidence on implementing a similar project either locally or internationally within the last five years.</li> </ul>

	c) A minimum of three (3) years of specific experience in analysing and evaluating policies and regulations related to eWaste management, deep knowledge on policy development processes and stakeholder engagement.
5.	<p><b>2.4 ICT Specialist:</b></p> <p>a) A minimum of Bachelors in Computer engineering, Telecommunication, and Electrical Engineering or similar</p> <p>b) A minum of five (5) years of general experience in ICT industry either manufacturing, assembly or maintenance of ICT equipments on large scale.</p> <p>c) A minimum of three (3) years of specific experience in developing and managing an eWaste systems on collection, segregation, recycling, treatment, and refurbishment. and understanding of waste management infrastructure and facilities requirements.</p>
6.	<p><b>2. 5 Waste Management Specialist:</b></p> <p>a) A minimum of Bachelor’s degree in waste management, environmental engineering, or a related field.</p> <p>b) Five (5) years of experience in designing and implementing eWaste management project at international level.</p> <p>c) Three (3) years of relevant experience in eWaste management infrastructure and facilities requirements.</p>

## 9.0 Estimated time inputs for key experts

The number of key experts and the estimated time input for each key expert for the assignment are presented in Table 4.

**Table 4: Estimated Time Inputs for Key Experts**

S/No	Key Experts	No	Estimated Time Input (staff-months)
1.	Lead consultant	1	10
2.	Researcher	1	10
3.	Environmental expert	1	5
4.	Policy/legal expert	1	5
5.	Waste Management Specialist	2	10
6.	ICT expert	1	10
<b>Total</b>		<b>8</b>	<b>50</b>

## 10. Responsibilities of the Client:

The employer will offer availability of staff and relevant documents. The Consultant is expected to have other relevant back-office support personnel and resources not limited to above experts to ensure successful completion of the assignment.

The Consultant will be supported where applicable with introductory letters to stakeholders to facilitate data collection and to conduct interviews.

The Employer will provide, as and when needed, working space at ICT Authority and its regional offices for the consultant to carry out project related assignments.

**11. Responsibilities of the Consultant:**

The consultant shall report to the ICT Authority Chief Executive Officer administratively, eWaste Division, Program Director and to the Kenya Digital Economy Acceleration Project (KDEAP) Project team operationally.

The Consultant shall share with the client personnel the following during the period:

- i. Detailed information (well in advance) of the planned timetable for field work;
- ii. Access to the survey data collection system