



Republic of Ghana

Ministry of Communications and Digitalisation

eTransform Project

IDA CR 6741-GH

Terms of Reference

for

**DIGITAL ECONOMY STUDIES ON THE FOLLOWING SECTORS: COMMUNICATIONS
AND CONNECTIVITY; AGRICULTURE; ENTREPRENEURSHIP AND INDUSTRY**

MAY 2021

1.0. Background

Digitalisation has taken centre stage in the running of socio-economic affairs globally. This phenomenon makes it incumbent on countries to lay a solid foundation to drive the adoption of digital tools, frameworks, policies, and best practices to respond to, and leverage current digital paradigms for the benefit of people and institutions. In shaping the digital future of nations, initiatives, policies, and development programmes must be aligned with the actual needs of the citizens and institutions.

Approaching the development of the digital economy in a manner that speaks to the needs and the environmental conditions of the local economy not only presents top-of-the-level outcomes for the people but also safeguards their future and imbues the country, its people and institutions with capabilities that enable them to respond to future events more optimally.

In the wake of COVID-19, the need for sound digital readiness capabilities by countries cannot be overemphasised. However, it is absolutely essential to develop a decision-making environment that is backed by data and insights. That is why conducting the right studies must be the first steps taken towards the development of a digital economy that yields top-notch results for all stakeholders.

Aligning policies and initiatives to the realities of the people and institutions in Ghana requires critical studies of key sectors of the economy to solicit relevant baseline insights and essential data to support decision making to help develop a digital economy that enriches the lives of all stakeholders.

Recognising the relevance of research to the development of our digital economy, the Government of Ghana and the World Bank, through the eTransform Project, have earmarked digital economy studies into specific sectors to provide the foundational insights that will aid Ghana's quest to determine a robust, all-encompassing digital future for her people.

The results of the studies will provide the Government and all stakeholders, with the proper foundation, aided by data, to enact sound policies and programmes such as the future Ghana Digital Acceleration Project (GDAP).

The eTransform Ghana project focuses on employing ICT-based interventions, and the prudent and efficient use of government resources, to advance shared and accelerated development in priority areas for Ghana. The project development objective is to improve the efficiency and coverage of government services delivery using ICT. The Project employs digital platforms, among other things, to nurture new businesses, create job opportunities, and promote digital entrepreneurship. The Project recognises that the process of digitalisation has the potential to improve the quality and reach of government service delivery, improve targeting of social protection spending, and ensure greater use of digital commerce. All activities supported by the Project are underpinned by an open and transparent environment, with provision for access to open and secure data, and potential for innovative applications.

2.0.Objectives of the Assignment

The objective of the consulting service is to utilise the appropriate research tools and resources to conduct comprehensive research on key selected sectors of the Ghanaian economy, notably, **Communications and Connectivity, Agriculture, Entrepreneurship and Industry**. The assignment will collect and provide baseline data and offer critical insights for decision-making on the development of Ghana's digital economy. The findings of the study will form the basis for the development of quick-win sectoral projects for future funding.

3.0. Scope of Work

The Consultant will conduct research into allotted digital economy study areas. Among other things, the Consultant, for each research area shall conduct his/her research in consonance with the expected scope of study in the scope table below:

Research Scope Table for the Sectoral study on Communications and Connectivity, Agriculture, Entrepreneurship and Industry

No	Sector	Research Area	Scope
1	Communications and Connectivity	Digital Infrastructure	<ul style="list-style-type: none"> a) Establish key baselines and metrics to assess the status of connectivity infrastructure (coverage, quality, price of broadband access, etc.) b) Undertake an inventory of Ghana's network infrastructure assets c) Classify the assets by their types d) Estimate Ghana's connectivity potential (capacity, capability, reach, access) e) Provide the network topography of key infrastructure f) Provide risk analysis on cybersecurity and natural disasters
2-1	Education	Digital skills and digital readiness of the <i>education sector</i>	<ul style="list-style-type: none"> a) Establish critical baseline and metrics to assess the

No	Sector	Research Area	Scope
		(Research would focus on education workers, academia, students, youth, and industry in Ghana)	<ul style="list-style-type: none"> level of digital skills in the education sector b) Develop a Ghana Digital Skills Index c) Conduct a gap analysis for the digital skills among teachers, students, and youth (disaggregate by socio-economic status and demography) d) Conduct a comparative benchmarking assessment of peer countries, in Africa and around the world, establishing key success factors and lessons. e) Make recommendations on how to train and develop digital skills for the demographic segment of the population
2-2		Digital skills and digital readiness of <i>civil servants and public sector workers</i>	<ul style="list-style-type: none"> a) Establish critical baseline and metrics to assess the level of digital skills in the public sector b) Develop a Ghana Digital Skills Index c) Conduct a gap analysis for the digital skills among civil servants and public sector workers (disaggregate by socio-economic status and demography) d) Conduct a comparative benchmarking assessment of peer countries, in Africa and around the world, establishing key success factors and lessons. a) Make recommendations on how to train and develop digital skills for

No	Sector	Research Area	Scope
			the demographic segment of the population
3	Agriculture	Adoption and readiness of digital agriculture throughout the value chain (Research would cover Crop, Animal and Fisheries sub-sectors)	<ul style="list-style-type: none"> e) Establish critical baselines and metrics to assess the country's agricultural readiness for digital transformation (adoption, digital literacy, digital skills, infrastructure, assets, etc.) f) Conduct complete inventory of Ghana's digital assets in the agricultural value chain g) Identify the use of digital technology in key agric sub-sectors such as fish farming, animal husbandry and crop farming h) Conduct a gap analysis for available digital services and tools in the sector i) Conduct a comparative benchmarking assessment of peer countries, in Africa and around the world, establishing key success factors and lessons. Analysis of socio-economic and demographic features of the territory j) Make policy recommendations on digital transformation in the agricultural sector
4	Entrepreneurship and Industry	Digital Entrepreneurship and Technology Service Providers Ecosystem	<ul style="list-style-type: none"> a) Establish critical baselines and metrics to assess the country's entrepreneur ecosystem for digital transformation

No	Sector	Research Area	Scope
			<ul style="list-style-type: none"> b) Classify the ecosystem into measurable segments with corresponding key indicators c) Determine the level of contribution of tech ecosystem to Ghana's Economy d) Conduct a gap analysis for digital skills in the sector e) Conduct a comparative benchmarking assessment of peer countries, in Africa and around the world, establishing key success factors and lessons. f) Identify policy impacts to the digital ecosystem over the last two decades g) Identify existing policy gaps h) Provide a comprehensive profile of Institutional Players in the Tech Ecosystem

4.0. OUTPUTS AND DELIVERABLES, AND ADMINISTRATIVE ARRANGEMENTS

Administrative Arrangements

The Consultant will work under the direct supervision of the Chief Director of the Ministry of Communications and Digitalisation through the Digital Economy Studies Coordinator (DESC). All deliverables of the Consultant will require approval of the Ministry of Communications and Digitalisation. All deliverables of the Consultant shall be shared with stakeholders, including the World Bank.

Assignment Duration and Schedule of Deliverables

The duration of the assignment will be Thirty (30 weeks), per the deliverables table below

The Team Leader's time inputs should be more than that of any other Specialist of the Consulting team. The selection method to be used under this Consultancy is a Quality and Cost Based (QCBS) Selection Method. The Consultants must therefore plan the staff inputs of Consultants into this assignment in order to be competitive.

The expected deliverables and the corresponding timing of various tasks are as follows:

	Deliverable	Activity	Time from the start of the assignment
1	Research and Resource Plan	Inception document and a structured programme the Consultant intends to use to conduct the digital economy research. This should include a plan of activities, tools, and resources (including human resources), key stakeholders and contacts required to conduct the research.	Commencement + 2 weeks
2	Draft Scoping and Literature Review Report	Conduct an initial framing of the research problem, scoping and review of available evidence and literature to inform the structuring of the research and make initial contact with relevant stakeholders.	Commencement + 4 weeks
3	Overarching Research Framework for sectoral studies	Define an overarching framework to be used to structure and guide the research. The framework will ensure consistency in methodologies and approaches to produce a coherent and integrated analysis across the study areas. This should look at: 1. the scope of the research,	Commencement+ 6 weeks

	Deliverable	Activity	Time from the start of the assignment
		<ol style="list-style-type: none"> 2. the questions to be answered 3. the definitions to be employed 4. the key methodological issues to be addressed 5. the approach to dealing with all the above. <p>It should also include topic guides to structure:</p> <ol style="list-style-type: none"> 1. evidence reviews, 2. consultations and 3. case studies, and 4. specify the types of data required and how these will be used in the analysis. <p>It will also provide guidance in ensuring that consultations and case studies cover a representative range of demographics, countries, ecosystems, and sectors as far as this is consistent with the research results being conveyed.</p>	
4	Presentation at Stakeholder workshop on Deliverables (1-3)	<p>Provide updates on the progress of the research being conducted by the research through the DESC.</p> <p>Be available to do a presentation to key stakeholders.</p>	Commencement + 8 weeks
5	Conduct Research	Conduct research using the most appropriate research and engagement methods.	Commencement + 18 weeks
6	First Draft of Findings Reports and Sheet of Indicators and Metrics (SIM)	Prepare the first full draft of the research findings. This draft may include sections where the research is not yet complete, or not yet completely integrated. Where this is the case, the draft will include information on progress made and expected content and plan to complete the rest of the study report.	Commencement + 24 weeks

	Deliverable	Activity	Time from the start of the assignment
		Submit a Sheet of Indicators and Metrics to highlight key statistics, metrics and baselines in the specific sectors being studied.	
7	Presentation of Draft Sector specific Digital Economy studies Report at Stakeholder workshop	Presentation of draft sector specific reports to stakeholders at a meeting to be organised by the Ministry of Communications and Digitalisation	Commencement + 26 weeks
8	Final Research Report	<ul style="list-style-type: none"> • Complete research and submit final research document for review • Submit final Sheet of Indicators and Metrics to highlight key statistics, metrics and baselines in the specific sectors being studied. • Clear indication of quick- win projects to be articulated 	Commencement + 30 weeks

All deliverables are to be provided in electronic form via email and on a USB memory stick and five (5) hard copies. Deliverables will be delivered to the Presidency through the Ministry of Communications and Digitalisation.

All reports, except the final, will be reviewed by MoCD and the World Bank and comments provided within two weeks from submission. The final report will be reviewed within three weeks. As part of the review process, the Consultant, working through the Digital Studies Economy Coordinator (DESC), will be expected to organise a presentation of reports at stakeholder workshops to be organised by MoCD.

Payments will be made after approval of submitted reports by MoC and The World Bank.

5.0. QUALIFICATIONS AND EXPERIENCE OF CONSULTANT

The Consultant is expected to be a firm which should meet the following minimum requirements:

- a) The selected organization should be a legally established organization in operations for a minimum of five years.
- b) The Consultant or Consulting entity shall have or shall have in their team, individuals with demonstrable experience conducting research in the specified areas of the studies.

- c) Experience in designing, implementing, and conducting studies in the context of the technology, digitisation, and the economy
- d) Provide References to similar research work conducted in the past
- e) Proof of financial capacity to mobilise needed logistics and resources to conduct the Digital Economy studies
- f) Proof of international experience and available network of experts to conduct such studies
- g) Demonstrate familiarity with Ghana and the Global environment with regards to the digitisation and the tech ecosystem
- h) Fluency and ability to conduct research in the English Language
- i) Proven experience in working with and supporting government agencies in Ghana or Africa

5.1. Staffing

The assignment will be executed by a multi – disciplinary team of experts comprising the following:

1. A Digital Economy Expert (Team Leader)
2. Sector-specific Experts
 - a) ICT Expert
 - b) Education Expert
 - c) Agricultural Expert
 - d) Digital Entrepreneurship Expert
3. A Sociologist/Economist
4. Monitoring and Evaluation Expert

Staff Qualifications and Experience

Digital Economy Expert (Team Leader)

- At least a Masters degree in ICT, Economics, Sociology or any other related field
- Must have been engaged in Digital Economy work for the past 5years
- Minimum 10 years experience in conducting research work
- Prior experience working with the Government of Ghana is desirable, especially in the sectors under study
- Excellent written and oral communication skills
- Proven ability to deliver high-quality outputs to meet tight deadlines

Sector Experts

- At least a Masters degree in the sector under study or a related field
- Must have been engaged in the sector under study for the past 5 years
- Minimum 5 years experience in conducting research work
- Prior experience working with the Government of Ghana is desirable, especially in the sectors under study
- Excellent written and oral communication skills

- Proven ability to deliver high-quality outputs to meet tight deadlines

Sociologist/Economist

- At least a Masters degree in Sociology or Economics
- Minimum 5 years experience in conducting research work
- Prior experience working with the Government of Ghana is desirable, especially in the sectors under study
- Excellent written and oral communication skills
- Proven ability to deliver high-quality outputs to meet tight deadlines

Monitoring and Evaluation Expert

- At least a Masters degree in ICT, Sociology, Economics or any other related field.
- Minimum 5 years experience in conducting research work
- Post Graduation training in Monitoring and Evaluation and/or demonstrated experience in Monitoring and Evaluation of development programmes
- Prior experience working with the Government of Ghana is desirable, especially in the sectors under study
- Excellent written and oral communication skills
- Proven ability to deliver high-quality outputs to meet tight deadlines

5.2. Adhering to Ethical Research Standards

The Consultant shall ensure that in conducting the studies, they adhere to strict ethical standards as stipulated below:

1. **Respect:** The researcher must recognise the capacity and rights of all individuals to make their own choices and decisions, and their right to be treated with dignity.
2. **Beneficence:** The researcher must have the welfare of the research participant in view.
3. **Fairness:** The researcher must ensure that the benefits for participants far outweigh the risks
4. **Research Design:** Research must be designed to protect vulnerable participants. Questions should be crafted in a very respectful manner by employing appropriate tone, language, and sensitivity to the culture of the participants
5. **Selecting Participants:** Participants should be involved if the participants will benefit from the findings of the research. The benefits of participating in the research should be more than the risks. Ultimately it is up to the participant to make that choice.
6. **Gaining the Consent of Participants:** The Researcher must gain informed and voluntary consent before conducting research with participants. This means that the participants must:
 - a. have the relevant information about what the research is
 - b. understand it, including the possible risks and benefits to themselves
 - c. be free to choose whether to participate, without inducement
 - d. give their consent, either written or verbal.
 - e. have the right to withdraw from the research at any time.

7. **Researchers must be qualified and/or trained for the task:** The Researcher needs to have good self-awareness and strong listening skills.
8. **Safe Spaces and Channels:** Research should be conducted in places that are socially comfortable for the participant and where they can speak freely.
9. **Cost Reimbursement:** If the participant incurs direct financial costs for participating, then they can be reimbursed. They should, however, not be paid to participate.
10. **Available Contact:** The participants must be able to contact the researchers, either directly or through local partners, in relation to any direct or indirect impact or experienced after engaging in the research. •
11. **Using the research findings:** Participants be told how research findings. Responses and input may be used.
 - a. They must then be asked, and must be free to choose whether:
 - i. they can be quoted in future materials by stakeholders of the research
 - ii. their real name can be used in stakeholder(s) materials
 - iii. their photographic image and/or film of them (if taken) can be used in stakeholder materials.
 - b. Their choices must be clearly recorded and always kept with their testimony and/or the relevant media.
 - c. If it is agreed that all or any part of a participant's testimony should be confidential, then that commitment must be clearly recorded and respected.
 - d. If the testimony is to be made anonymous or used with a false name, make sure that any other identifying details are also changed.

6.0. DATA, FACILITIES AND PERSONNEL TO BE PROVIDED BY THE CLIENT

The MoCD will provide access to relevant reference materials, existing reports, data information available that may be required by the Consultant. The MoCD will also facilitate access to other Government offices, private and public enterprises as appropriate. The Consultant is expected to be self-sufficient in terms of office space, supplies, communications, computers, and transport during the performance of the assignment.