



**Technological Innovation Development in Africa to Enhance Employability,
Entrepreneurship and Job Creation (TIDE)**

**STAKEHOLDER MAPPING AND ANALYSIS OF SCIENCE,
TECHNOLOGY AND INNOVATION (STI) IN SELECTED
SUB-SAHARAN AFRICA COUNTRIES**

The case of Ethiopia, Ghana, Kenya, Nigeria, Rwanda, Senegal, Uganda and Zimbabwe

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ACRONYMS AND ABBREVIATIONS

AAS	African Academy of Sciences
AAU	Association of African Universities
ACTS	African Centre for Technology Studies
ADLI	Agricultural Development Led Industrialisation Strategy
AERC	African Economic Research Consortium
AfCFTA	African Continental Free Trade Agreement
ADB	African Development Bank
AMCOST	African Ministerial Council on Science and Technology
ANSD	National Agency for Statistics and Demography-Senegal
AOSTI	African Observatory of Science Technology and Innovation
ARIPO	African Regional Intellectual Property Organization
ATPS	African Technology Policy Studies Network
AU	African Union
AUC	African Union Commission
AUDA	African Union Development Agency
AU-STRC	African Union Scientific Technical Research Commission
ASRIC-STRC	African Scientific, Research and Innovation Council - Scientific Technical Research Commission
DGRI	General Directorate for Research and Innovation-Senegal
DUV	Digital Uganda Vision
FARA	Forum for Agricultural Research in Africa
FDI	Foreign Direct Investment
FGDs	Focus Group Discussions
FMST	Federal Ministry of Science and Technology-Nigeria
GDP	Gross Domestic Product
ICT	Information Communication Technology
IDRC	International Development Research Centre
IFC	International Finance Corporation
IMF	International Monetary Fund
IP	Intellectual Property
INGSA	International Network for Government Science Advice
KAM	Kenya Manufacturers Association
KEPSA	Kenya Private Sector Alliance
KIPI	Kenya Industrial Property Institute
MCF	Mastercard Foundation
MDAs	Ministries, Departments and Agencies
MESRI	Ministry for Higher Education, Research and Innovation
MESTI	Ministry of Environment, Science, Technology and Innovation
MIGA	Multilateral Investment Guarantee Agency
MInT	Ministry of Innovation and Technology
NACOSTI	National Commission for Science Technology and Innovation-Kenya
NCST	National Commission for Science and Technology-Rwanda
NEPAD	New Partnership for African Development
NIRDA	National Industrial Research and Development Agency
NIS	National Innovation System
NOTAP	National Office for Technology Acquisition and Promotion
NRIF	National Research and Innovation Fund
NSTIC	National Science, Technology and Innovation Council
NSTIH	NEPAD Science, Technology and Innovation Hub
OAPI	Organisation Africaine de la Propriété Intellectuelle
OECD	Organisation for Economic Cooperation and Development
PAIPO	Pan African Intellectual Property Organisation
PAU	Pan-African University
PWDs	People living with disabilities.
REC	Regional Economic Communities
SDGs	Sustainable Development Goals
SGCs	Science Granting Councils
SGCI	Science Granting Councils Initiative
Sida	Swedish International Development Cooperation Agency
SSA	Sub-Saharan Africa
STEM	Science Technology Engineering and Mathematics

STC	Specialized Technical Committee
STI	Science Technology and Innovation
STISA	STI Strategy for Africa
TETFund	Tertiary Education Trust Fund
TEF	Tony Elumelu Foundation
TVETs	Technical Vocational Education Training
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
UR	University of Rwanda
WIPO	World Intellectual Property Organization
WTO	World Trade Organization
YAW	Young African Works

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EXECUTIVE SUMMARY

Background and rationale

Governments across the globe agree that Science, Technology, and Innovation (STI) is a major enabler for sustained socio-economic growth. However, the success of STI in stimulating technological innovation, skills development, job creation and entrepreneurship depends on the understanding of roles and the magnitude of interaction among different actors in the ecosystem. The National Innovation System (NIS) that works optimally ensures that Research and Innovation produce new knowledge that should be freely shared and available to youth who want to use it to create new ventures and increase job opportunities. Most sub-Saharan African countries have experienced significant economic growth over the last decade, yet employment challenges still remain. This economic growth has not been creating enough jobs for the youth and marginalised groups. Unemployment especially among the youth has often been touted to be the cause of increasing crime, political violence, religious radicalization, and/or human trafficking. Growth cannot be considered inclusive without decent work for the population. Also, it is important to note that inclusive growth requires higher rates of female labour force participation, yet women remain marginalized in the labour market in sub-Saharan Africa. There appears to be positive progress made in sub-Saharan Africa towards gender parity in the world of work given the high rate of labour force participation, yet too few women are in high-quality professional and technical jobs while most women work in low-paid, often subsistence-level jobs in the informal economy.

Despite the high acknowledgement by governments across Africa, of the role that STI can play in improving these situations by catalysing creativity and entrepreneurship, there are still major challenges that need to be addressed to significantly contribute to development in Africa. Policies have been developed in sub-Saharan African countries but there are still challenges in implementation. This could be attributed to the nature and systems that are in place to implement them. Institutions established to oversee and implement these policies have not fully managed to strengthen the systems to allow collaboration and cooperation amongst the key actors especially those not affiliated with the government and its agencies. The private sector and the Non-Governmental Organizations (NGOs) have not been fully involved. There is also evidence of the limited impact that relevant policy initiatives can have in the absence of institutional and broader human resource capacity as has been depicted in this report. STI is cross-cutting and needs to be considered by all government ministries in the coordination of development strategies. However, governance remains largely rhetorical. Although it is recognised in policy and political discourse, it is lacking in implementation in most sub-Saharan African countries.

Objectives and methodology

The Technological Innovation Development in Africa to Enhance Employability, Entrepreneurship and Job Creation (TIDE) project proposed to conduct an STI stakeholder mapping and analysis in selected African countries namely Ethiopia, Ghana, Kenya, Nigeria, Rwanda, Senegal and Uganda to determine their roles, linkages, power and influence as far as technological innovation, skills development for employability, job creation and entrepreneurship is concerned. This study was conducted through a thorough methodological approach that allowed extensive data collection amongst key stakeholders in the target countries. The data collection process involved desk studies, key informant interviews (KIIs) and focus group discussions (FGDs). The respondents were carefully selected to cover the five (5) key stakeholder categories: Government/Policy makers, private sector, non-governmental organizations (NGOs)/civil society organizations (CSOs), Research Institutions, and development partners/media. The respondents rated the level of power and influence among stakeholders for each category based on their perceptions. This rating was not based on any data or indicators but rather a general perception and therefore was purely subjective. The mean rating was calculated, and power-influence grids were developed for each stakeholder category.

Key Findings

The findings reveal that the study countries have NIS that widely differ in terms of the levels of technological capabilities of their stakeholders and the quality of enabling environment for innovation and entrepreneurship. They are internally diverse with pockets of excellence emerging in some of the study countries. For example, innovation systems in the countries have poorly developed enabling environments which often encourage domination by the informal sector which has limited access to finance, lack of skilled labour, low-quality technical infrastructure, and weak and unstable regulatory and institutional frameworks. However, the informal sector has had the highest contribution among the youth, women, and marginalized groups sector accounting for almost 70% of new innovations and over 80% of new job opportunities for young people. This means that in addition to

improving policy and regulatory environment, other stakeholders have opportunities to tap into this market and support the development of the sector to minimise the challenges the sector faces.

At the continental level, the African Union (AU) has adopted the STI Strategy for Africa STISA 2024 intended to guide the first 10 years of action towards achieving Agenda 2063. Institutionally, African Union Development Agency-New Partnership for African Development (AUDA-NEPAD) is now well-established and continues to evolve to implement the AU's policies more effectively alongside other arms of the AU such as its long-standing Scientific Technical Research Commission (AU-STRC). Despite the strategies being in place, the impacts of these are still yet to be felt and the linkage with regional bodies and national governments has yet to yield tangible fruits.

At the national level, governments have established policies with institutions established to implement them. There are different stakeholders that play different roles in the STI realm to support skills development and job creation, especially among the youth at the national level. The private sector, CSOs and NGOs are also playing their roles and mandates within the established systems based on their interests. All these institutions have different levels of power and influence within the STI ecosystems. The higher the power and influence of any stakeholder, the more the voice and control are exerted within the ecosystem and vice versa. In the context of this study, power refers to the ability to control or make decisions, while influence refers to the ability to affect or sway those decisions. Power is often associated with formal authority, such as a position of leadership, while influence can be held by anyone, regardless of their formal role or position. Power is often used to achieve specific goals or outcomes, while influence is used to persuade or change the attitudes or behaviours of others. The stakeholders with high powers (e.g., governments and policymakers) can control or direct others, enforce their own interests or make things happen. Those with high influence (e.g., CSOs, NGOs, Think Tanks, etc.), on the other hand, have the capacity to shape the beliefs, attitudes, or actions of others without using coercion or force.

In **Ethiopia**, the key stakeholders are the government and government regulatory agencies, that provide legal framework and funding, external agencies, civil society organizations, and informal sector representatives. The Ethiopian NIS strongly shapes the country's technological development and innovation performance. The National Science, Technology and Innovation Council (NSTIC) is the regulatory body for Ethiopia's STI policy and action plan. Its key objective is to establish and coordinate the general strategy and framework for developing STI in the country. NSTIC is supported by key ministries, which are the main implementers of the STI policies in the country. The ministries also act as key funding agencies for public research institutions and intermediaries in the national research framework. Other funding sources come from international funders who mainly fund research activities in universities, private research institutes, private think tanks, and international research institutes such as the African Development Bank (AfDB) and United States Agency for International Development (USAID) among others. The private sector in Ethiopia is still underdeveloped, with limited job creation opportunities for the youth hence the need for putting in place incentives to stimulate private sector investment. The Ministry of Innovation and Technology (MinT), and Ministry of Education (MoE) among other key ministries in the priority sectors, are the most powerful and influential. Key agencies such as Oromia Science and Technology Authority, Higher Education Relevance and Quality Agency and Ethio-Telcom are also the most powerful and equally influential among government stakeholders in Ethiopia. The private sector stakeholders have different power and influence levels. This can be attributed to their size, role and location in the country. The Ethiopian Leather Industries Association (ELIA), Ethiopian Textile and Garment Manufacturers Association (ETGMA) and Midroc Investment Group (MIG) are rated as the most powerful and influential while BfarmTech and RENEW are rated the least powerful and influential. The Ethiopian Chamber of Sectoral Associations (ECSA), Ethiopian Chamber of Commerce and Sectoral Associations (ECCSA) and Ethiopian Youth Entrepreneurs Association (EYEA) are perceived to be the most powerful and influential among the NGOs/CSOs.

In **Ghana**, the main stakeholders for STI development are the Ministries of Environment, Science, Technology and Innovation (MESTI) and that for Education are responsible for STI policy formulation, working through directorates alongside advisory committees and research organisations. Council for Scientific and Industrial Research (CSIR) is Ghana's main science and technology research institution that conducts research in various priority sectors and also provides technical advice and support to government and industry. The National Science and Technology Policy Committee (NSTPC) is responsible for advising the government on matters related to STI policy. Ghana receives funding support mainly from international organizations like Mastercard Foundation, UNESCO, IDRC, and USAID among others, to increase STI-focused research and innovation activities including youth employment, job creation, and entrepreneurship. Among the government stakeholders, the Ministry of

Environment, Science, Technology and Innovation (MESTI), the Ministry of Trade and Industry (MTI) had the highest power and influence. CSIR and Kwame Nkrumah University of Science and Technology (KNUST) had the highest power and influence among the research organizations. In the private sector category, the Association of Ghana Industries (AGI) was rated highest in both power and influence. The Alliance for Green Revolution in Africa (AGRA) was rated moderately powerful and had a high rating in terms of influence in the NGOs/CSOs category, while the Ghana Life Savers Organization (GLSO) and the Informed Choice Foundation of Ghana (ICFG) had the least power and influence. Generally, the private sector stakeholders and NGOs/CSOs wield low power and with some having low to moderately high influence in Ghana.

In **Kenya**, the Ministry of Education is the key government ministry responsible for all research and innovation while the STI Act of 2013 established the National Commission for Science Technology and Innovation (NACOSTI) to develop national STI priorities, leading inter-agency efforts to implement policies, accrediting research institutes, and granting licenses to undertake research activities. The Act also established the National Research Fund (NRF) and the Kenya National Innovation Agency (KENIA) with specific mandates of funding research and supporting the development of innovations respectively. Intermediary institutions such as Kenya Industrial Property Institute (KIPI) are drawn from various ministries to protect and promote industrial property rights and foster innovation for sustainable development in Kenya. Other private and public think tanks and institutions such as the Kenya Institute for Public Policy Research and Analysis (KIPPRA), Kenya Private Sector Alliance (KEPSA), African Economic Research Consortium (AERC), and ATPS among others, together bridge the gaps in research, policy and practice and create platforms that research organisations can use to advise policymakers. However, some of these institutions have not established offices at the county level following the devolution of key ministries and services and therefore, access to their services by youth from rural areas is a major challenge despite them having digital tools to support service delivery. Among the government stakeholders, most of the Ministries, Departments and Agencies (MDAs) including the Ministry of Education, KENIA and NACOSTI were highly rated by the respondents in both power and influence. Innovation Hubs such as Nairobi Garage (NG), Akirachix (AX), iLab Africa (iLab) and Gearbox (GBX), and KEPSA were rated high in power and influence among the private sector stakeholders in Kenya. Both public and private research institutions except Kenya Industrial Research and Development Institute (KIRDI) which was rated highly powerful and influential, were rated moderately powerful and influential. In the NGOs/CSOs category only Kenya Climate Innovation Centre (KCIC), Green Belt Movement (GBM), and Rural Initiative for Sustainable Development (RISD) were rated highly and fall into the high power-high influence quadrant.

In **Nigeria**, STI development is the catalyst for increased human capital development with the population of youths as a high resource base for technological innovation and entrepreneurship development. The implementation of the STI policy and framework falls within the mandate of the Federal Ministry of Science, Technology, and Innovation which also spearheads the regulation of STI activities in the country. The National Research and Innovation Council (NRIC) comprising the President and Federal Ministers from sectoral ministries with connections to STI is mandated to set national priorities on research and development and set and coordinate STI activities in line with national priorities. The NRIC is also responsible for the establishment of new research institutes and the strengthening of existing ones. Nigeria has not yet established a research and innovation funding agency but has the Tertiary Education Trust Fund (TET Fund) which only supports public university research and innovation activities. This has severely affected the funding of research outside public universities. Among the government stakeholders, most of the MDAs were rated powerful and influential except the National Biosafety Management Agency (NBMA). All the research institutions in Nigeria that were mapped were rated between low and moderately powerful or influential except the Raw Materials Research and Development Council (RMRDC) which was rated with the highest power and influence. The same applies to the NGOs/CSOs category with only Rural Farmers Hub (RFH) being rated moderately powerful and influential.

In **Rwanda**, knowledge production has centred on the collation of all public universities and their constituent colleges into one single university ‘The University of Rwanda (UR), is a key country’s knowledge hub’. Emerging, and complementing other public systems are the Technical Vocational Education Training (TVETs) institutions that empower the youth with capabilities to help Rwanda achieve its vision through its manifesto “Made in Rwanda policy”. Innovation hubs and fabrication labs are supporting knowledge production as well as ICT innovations to address widespread societal issues in the country. While the systems and institutional setup for knowledge production are clearer in Rwanda, challenges remain in building a critical mass of researchers and supporting potential knowledge producers in the non-state sectors to contribute to Rwanda’s knowledge portal and support for knowledge co-production. The governance framework has also created systems for enhancing

appropriate funding for research and development (R&D) activities, through the establishment of the National Research and Innovation Fund (NRIF) coordinated by the National Council for Science and Technology (NCST). Just like the other countries, government stakeholders were generally rated highly powerful and influential. They are all in the high power-high influence quadrant or bordering it. With respect to NGOs/CSOs, respondents rated international development partners such as the World Bank Group, AfDB, AGRA and UNDP to be very powerful and influential. The private sector stakeholders were generally rated lowly in terms of power and influence with the exception of the Private Sector Federation (PSF), Airtel/TIGO and MTN which were rated as more than moderately powerful and influential.

In **Senegal**, the government is committed to investing in R&D even though the country does not yet have an explicit policy for the STI sector. However, a draft STI policy has been developed and waiting for gazettelement. There is reported increased awareness of STI among the population even without an explicit policy (Daniels et al, 2020). The Plan for Senegal Emergence (PSE) on human capital, places high expectations for STI to contribute to the country's structural transformation and objective of becoming an emerging economy. The ongoing implementation of higher education reforms has led to procedural, organisational, and structural changes within the STI system' The adoption of a new framework law under the 11 Presidential Decisions has expanded the Ministry for Higher Education, Research and Innovation (MESRI) remit to include innovation and responsibilities for two new missions: universities' contributions to community services and graduates' access to employment. MESRI is responsible for implementing the reforms and has oversight of STI activities in Senegal. MESRI's Scientific Research and Technological Development Financing Directorate (DFRSTD), is in charge of various funding platforms available for scientists and researchers in the country. The responsibilities of DFRSTD include implementing the national budget for scientific research and technological development, monitoring and controlling the use of funds, implementing management procedures, preparing, and organizing sessions for the National Council of Higher Education, Research, Innovation, Science and Technology, and implementing measures to increase participation of the national scientific community (MESRI, 2019). The weakness and fragmentation of funding sources, lack of visibility, lack of synergy between the stakeholders are the major challenges to overcome if innovation is to contribute more to youth employment and socioeconomic development in Senegal. Among the government stakeholders, the MESRI and the Center for Experimental Research and Study of Equipment (CEREEQ) have the highest level of power and influence. For NGOs/CSOs, most of the mapped institutions were perceived to be more influential than powerful. ENERGECO Ltd was rated the most powerful and influential private company. The others were rated moderate to low in the level of influence and power. Senegalese Institute of Agricultural Research (ISRA) was perceived to be the most powerful and influential research institution according to the respondents while the Higher Institute of Professional Education (HIPE) was perceived to be the least powerful and least influential.

In **Uganda**, entrepreneurial networks are abundant, and creative entrepreneurs, who quickly recognise opportunities and endeavour to exploit them abound. Many Ugandans tend to start businesses in all spheres of STI operations but unfortunately, many of these businesses experience a high failure rate leaving the majority of the youths unemployed. The Uganda STI policies are implemented by Uganda National Council for Science and Technology (UNCST) working with MDAs such as the Ministry of Education, Ministry of Science, Technology and Innovation (MoSTI), Directorate of Industrial Training (DIT) and the National Information Technology Authority (NITA). MoSTI is responsible for developing the country's research policies in line with the National Plan for STI, and guides coordination and priorities-setting and policy development. Japan International Cooperation Agency (JICA) and Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) are examples of development partners and non-governmental agencies respectively that are also heavily involved with STI in Uganda in various sectors that align with their interests. Development of skills and training in TVETs among the youth in Uganda face a myriad of challenges. For instance, there is stigmatisation based on which institution one was trained, low esteem and parity of status with its academic counterpart, policy inconsistency, endemic public corruption, philosophical disorientation, as well as historical, socio-economic, and cultural prejudices (Okware and Ngaka, 2017). This is due to lack of clearly defined standards in the tertiary education in Uganda. In terms of power and influence among the government stakeholders, MoSTI and NCST were rated highest while DIT and NITA were the lowest rated. Among the Research Institutions Uganda Industrial Research Institute (UIRI) has the highest power and influence while Mbarara University of Science and Technology (MUST), ABI Zonal Agricultural Research and Development Institute (ABI) etc., were rated lowest in both power and influence. The rest of the research institutions mapped were rated only moderately powerful and influential. Only JICA that was rated moderately in terms of power and with high influence, the rest of the NGOs/CSOs were not rated highly in both power and influence. Just as the NGOs/CSOs in Uganda, the private sector stakeholders

were also lowly-moderately rated for both power and influence except Uganda Manufacturers Associations (UMA) that was rated moderately high for both power and influence.

In **Zimbabwe**, the government has made some progress in the implementation of STI, driven by policy reforms, an increasing trend in funding, improved collaboration, entrepreneurship, and human capital development. These efforts have led to the development of innovative products and solutions, which have the potential to drive economic growth and development in the country. However, challenges in youth unemployment and a dwindling economy still exist. Some of the key policies enacted and institutions established by the government to address these challenges include Vision 2030 which is being implemented through the First National Development Strategy (NDS1). The Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) was created in 2017 by the merger of the Ministry of Higher and Tertiary Education and the Ministry of Science and Technology Development, to create a more coordinated and integrated approach to STI policy and planning. Other institutions established include the Zimbabwe National Innovation Fund (ZNIF) in 2019 to provide funding and support to innovative start-ups and SMEs in Zimbabwe. There have also been efforts to strengthen and restructure existing institutions such as the Scientific and Industrial Research and Development Centre (SIRDC) and the National Biotechnology Authority (NBA), to improve their capacity to support research and innovation in Zimbabwe. The other stakeholders outside the government are also active in the NIS and wield different levels of power and influence within their mandates. The lack of effective communication and cooperation between stakeholders has resulted in a siloed approach to STI implementation, limiting the potential for collaboration and the development of innovative solutions. Also, the government and researchers need to collaboratively identify evidence gaps and research priority areas. This will aid in dual ownership and evidence is more likely to be used. Researchers and policymakers should also package information for stakeholders at different levels as they all possess different levels of comprehension. Among the **Government institutions**, the key ministries, departments and agencies were rated highest in terms of power and influence. These were joined at the top by the Zimbabwe Council for Higher Education (ZIMCHE) while **Research institutions** were rated to have high power and influence. Among **NGOs/CSOs** that were mapped, all the big international NGOs were rated to have high power and influence.

Conclusion

The study countries have established institutional frameworks that are aimed at implementing STI policies to enhance technological innovation, skills development, job creation and entrepreneurship. This has been done through NIS where actors are drawn from the five (5) stakeholder categories. The stakeholders mapped in the different countries have different levels of power and influence as has been described above and thus, will have different capacities to contribute to changes in policy and practice. This implies that initiatives should target the stakeholders with the highest power and influence in the ecosystem but also ensure the other actors with relatively low power and influence are carried along. This is because the level of power and influence is not static but dynamic. Numerous challenges have been identified that have contributed to poor or non-optimal delivery of services hence leading to failure in achieving the set national goals. These have provided opportunities for stakeholders to make interventions based on their specific interests. Some of the challenges include low capacity of the institutions and the technical capacity of employees to deliver on their mandates, poor funding from the government to support institutions, lack of appropriate policy framework and its implementation as well as the platform for engagement and collaboration of different stakeholders, weak interlinkages among stakeholders even with the same stakeholder category, and duplication of mandates. Nonetheless, connecting the dots, and building strong linkages among the various players in the STI ecosystem is imperative in order to create enough jobs for the youth as well as the marginalized groups. This report provides a set of challenges that provide opportunities for different actors in the ecosystem to address them. On a positive note, it is important to recognise the huge strides that countries have made to establish policies and institutions to support the STI sector to enhance youth employment. This has been done through national, regional and international initiatives that are being implemented with significant results throughout sub-Saharan Africa. The Science Granting Councils Initiative (SGCI), an initiative by IDRC and Sida for instance has supported many African countries to establish Science Granting Councils (SGCs) and or National Research Funding Agencies at the national levels. This initiative has been an enormous success in Kenya, Uganda, Rwanda, Ghana and Senegal. Nigeria is in the process of establishing its SGC and National Research Fund with support from the SGCI.

Recommendations

This study identifies key areas that governments and key stakeholders in the STI ecosystem need to pay attention to. There is need for:

- i) Governments should encourage inclusive participation of all stakeholders in the STI ecosystem thereby enhancing skills development and youth employment.
- ii) Civil society actors and the media need to increase awareness and advocacy efforts to support mainstreaming of STI in government policies and programs to enhance youth employment.
- iii) Governments to liaise with key stakeholders to develop Robust Indicators for measuring progress in youth employment emanating from the implementation of STI Policies, Plans and Programmes
- iv) Governments working with development partners to support strengthening the capacity of national institutions to adequately implement STI policies and programs geared towards the creation of jobs for the youth.
- v) Encourage investment in the necessary infrastructure, equipment and human resource capacity to support STI and entrepreneurial training.

1. INTRODUCTION

1.1 Background

Many countries in Africa have experienced significant economic growth over the last decade yet employment challenges remain, as this economic growth has not created enough jobs. Unemployment can lead to violence and unrest because unemployed young people are often the most vulnerable to crime, political violence, religious radicalization or human trafficking. Growth cannot be considered inclusive without decent work for the population. With regard to the population aged 25 or over, the employment-to-population ratio was 68% in 2019, that is, one in three Africans aged 25 or over was unemployed (United Nations Conference on Trade and Development [UNCTAD], 2021). In 2019, the female labour force participation rate of 54% in Africa compared favourably with the global average of 47%. Women account for more than 50% of the population in Africa, but generated only 33% of the continental GDP in 2018. Inclusive growth requires higher rates of female labour force participation, yet women remain marginalized in the labour market in Africa. Progress made in Africa towards gender parity in the world of work appears positive given the high rate of labour force participation, yet too few women are in high-quality professional and technical jobs and most women work in low-paid, often subsistence-level jobs in the informal economy. Backhaus and Loichinger (2021) found a positive association between female labour force participation and female educational attainment across working ages.

Building and strengthening transformative science technology and innovation (STI) systems in sub-Saharan Africa (SSA) is as much a political and economic challenge as it is technical. Current political economy contexts – whether national, regional or global – condition the ways STI systems in SSA evolve, the goals they prioritise, and which STI system actors secure economic benefits and power (Daniels et al, 2021).

STI is increasingly understood to be important for achieving economic growth and development goals in SSA. This is reflected in policy and institutional developments at various levels. This is because policies and institutions embedded in STI development have been shown to have the greatest potential to accelerate job creation (African Union Commission [AUC], 2014). Despite witnessing renewed enthusiasm for STI as a policy item and science funding in SSA, there is a concern among analysts that investment in STI does not automatically lead to social and economic development (Arocena et al, 2017; Cirera and Maloney 2017). There is also evidence of the limited impact that relevant policy initiatives can have in the absence of institutional and broader human resource capacity.

STI is cross-cutting and needs to be considered by all government ministries in the coordination of development strategies. However, governance remains largely rhetorical. Although it is recognised in policy and political discourse, it is lacking in implementation (Daniels et al, 2021). National Innovation Systems (NIS) widely differ in terms of the levels of technological capabilities of their actors and the quality of the enabling environment for innovation (Cirera and Maloney, 2017; UNCTAD, 2019).

1.2 Rationale for the study

The African region is experiencing unparalleled population growth and the growth of an extremely young (working) population. Coupled with fast-growing urbanisation, Africa is expected to have a larger workforce than either India or China by 2034 (Manyika et al., 2017). This upcoming generation of youth is acquainting itself well with the new technologies and are hungry to succeed. However, for any programme or initiative such as the Mastercard Foundation's Young African Works (YAW) Strategy to sustain itself, it must be anchored in one way or the other into the policy and institutional frameworks of the participating countries and implemented by relevant institutions including the ministries, departments and agencies (MDAs) as well as the industry and research systems. It becomes imperative, therefore, to conduct a stakeholder mapping and analysis to identify the key actors, their roles, linkages, contexts, capacities, power and influence so as to effectively design and mainstream programmes that will contribute to sustainable development.

In Africa, internet access, the use of computers, and mobile networks have drastically grown during the last two decades. The new Information Communication Technology (ICT) has opened new opportunities for African domestic firms to gain relatively easy access to technologies that could help them to embark on innovation-driven growth trajectories. The notions of the Third Industrial Revolution and the Internet of Things have been introduced, which would enable the democratisation of technology across regions and societies (Howard, 2015). Across African countries, many examples can be found of individual entrepreneurs who have managed to set up innovative companies with the use of open-access ICT applications. This could make innovative domestic firms potentially less dependent on technology transfer, for instance through Foreign Direct Investment (FDI) by multinational enterprises.

At the same time, the new opportunities offered by ICT developments should be looked upon with care. There have been reports warning of a digital divide, in which a happy few will reap all the benefits while a majority of people lag behind, especially women and marginalized groups. This, therefore, calls for institutional interventions to ensure that this development does not come at a high cost. This needs to involve all stakeholders through regular engagements and consultations before major decisions and interventions are reached and implemented.

There is burning energy among the youth in sub-Saharan Africa. Many young people, unable to get a job after completing secondary school or university, are seeking to establish social enterprises and businesses. There is a fearlessness among them. They have nothing to lose by failure as they cannot be worse off than they already are, without jobs and any social welfare support. There is also idealism and optimism borne from youth that drives them. They yearn for success and the rewards that success will bring to them personally, for their families, for their countries and for sub-Saharan Africa.

1.3 Objectives and Scope of Study

The main objective of this study is to map out the key actors/stakeholders in the STI sector that are critical in technological innovation and job creation for socioeconomic development and inclusion in *Ethiopia, Ghana, Kenya, Nigeria, Rwanda, Senegal, Uganda* and *Zimbabwe*. Their roles, linkages, powers and influence are discussed alongside what works, what doesn't work and why. Specifically, this study aims to:

- i) Identify key stakeholders across the five stakeholder categories/clusters (Government, Non-Governmental Organizations/Civil Society Organisations, Private Sector, Researchers and International Development Partners).
- ii) Establish the role of the actors, their linkages, power and influence.
- iii) Identify best practices, challenges and possible opportunities for stakeholders in creating job opportunities for the youth.

2. METHODOLOGY

2.1 Desk Studies

The bulk of the data was collected through desk studies. A review of all grey and published materials from reports and other secondary information was undertaken to collect information already available in the public domain. This activity focused on identifying key stakeholders in the STI sector drawn from the government, civil society, research institutions, the private sector and international development partners. Key national reports, strategies, plans and policy documents were reviewed to identify these key players in the STI sector, their roles, linkages, powers and influence. The desk studies targeted to identify how youth, women and other marginalized groups have been involved and supported.

2.2 Key Informant Interviews and Surveys

The secondary data was complemented with primary data where quantitative and qualitative surveys were conducted remotely without interpersonal contacts using both structured and open-ended questionnaires. Based on the information obtained from the desk studies, key informants in the priority sectors from the countries of focus were identified and interviewed virtually to obtain deeper insights and respondent perspectives. Youth, women, people living with disabilities (PWDs) and other marginalized groups were also targeted as part of the key informants in the interviews and surveys.

2.3 Focus Group Discussions

Focus group discussions (FGDs) were conducted to triangulate the data and information obtained from desk studies, KIIs and field surveys. Some of the participants were drawn from the key informants drawn from the different stakeholder categories (Government, Private sector, Civil Society, development partners and Researchers). Youth, women, PWDs and other marginalized groups were deliberately targeted and incorporated as participants in these FGDs.

2.4 Data Analysis

Data collected were cleaned and collated for ease of analysis. The desk review study culminated in a report developed from notes from various reference materials. Interviews and FGDs were transcribed, and detailed notes were written and used to update the desk study report. The quantitative data were analysed, and results were presented in summary tables, and graphs as deemed appropriate. Qualitative data were analysed using narrative analysis. Gender-specific information was also analysed and reports were generated to illuminate these findings.

3. FINDINGS AND DISCUSSIONS

This section provides a comprehensive analysis and review of the information obtained from the literature reviews in desk studies and virtual interviews on STI stakeholders in the STI ecosystem in Africa for technological innovation, employability and entrepreneurship at the continental, regional and national levels. Special attention is given to issues around gender inclusion, youth, women, PWDs and other marginalized groups.

3.1 Overview of STI Institutional Arrangements in Africa

At the continental level, the African Union (AU) has adopted the STI Strategy for Africa STISA 2024 (AUC, 2014) intended to guide the first 10 years of action towards achieving Agenda 2063, further detailed in its first 10-year implementation plan (AUC, 2015). Institutionally, New Partnership for African Development (NEPAD) is now well-established and continues to evolve to implement the AU's policies (NEPAD, 2013) more effectively alongside other arms of the AU such as its long-standing Scientific Technical Research Commission (AU-STRC). There is also widespread adoption of STI policies and institutional developments in support of these initiatives at the sub-regional level (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2016) and by many SSA nations (African Observatory of Science Technology and Innovation [AOSTI], 2013). These developments are happening in the context of the adoption of the Sustainable Development Goals (SDGs) by the international community, which include specific references to STI within SDG 17 (United Nations General Assembly [UNGA], 2015).

Key funding bodies such as the Canadian International Development Research Center (IDRC), the Swedish International Development Agency (Sida), the Mastercard Foundation, Bill and Melinda Gates Foundation, and the Rockefeller Foundation among others, have played a very important role in STI development in Africa and across the world. For instance, IDRC and Sida sponsored the Science Granting Councils Initiative (SGCI) in SSA which aims to strengthen the capacities of Science Granting Councils (SGCs), to support research and innovation as well as evidence-based policies that can contribute to economic and social development. In the SGCI Phase 1, the Initiative strengthened the ability of 15 participating Councils in Ethiopia, Kenya, Rwanda, Tanzania, Uganda, Botswana, Malawi, Mozambique, Namibia, Zambia, Zimbabwe, Burkina Faso, Côte d'Ivoire, Ghana, Nigeria, Senegal and Sierra Leone to i) manage research; ii) design and monitor research programmes, and to formulate and implement policies based on the use of robust STI indicators; iii) support knowledge transfer to the private sector, and; iv) establish partnerships among Councils and with other science system actors. Under the current SGCI Phase 2, the Initiative has deepened and broadened its work with the Councils to i) strengthen their ability in research management; ii) strengthen their capacity to use data and evidence in policy and decision-making; iii) support their ability to fund research and innovation; iv) support strategic communications, uptake of knowledge outputs and networking; and v) strengthen their capacities in gender equality and inclusivity. Councils when effective are expected to strengthen the functioning of the national research and innovation systems, and ultimately lead to desired transformations in the sector at national, regional and continental levels.

3.2 Continental and Regional STI Stakeholders

Different institutions were proposed in the STISA-2024 to play specific roles at the continental and regional levels. They include:

African Union Commission (AUC): The African Union Commission as the AU secretariat shall be responsible for providing political and policy leadership for the implementation of this Strategy. Its specific roles will include: (a) convening meetings of the STC and ensuring that resolutions of such meetings are transmitted to the AU summits (b) initiating policy processes aimed at addressing specific Science, Technology and Innovation issues (c) leading delegations to international processes and negotiations on Science, Technology and Innovation issues (d) providing a focal point for liaising with United Nations agencies, it's conventions and related scientific bodies on matters pertaining to policy, (e) convening annual partnership platforms and (f) creating various advocacy schemes for promoting STI and ICT.

African Heads of State and Government: They support the STISA-2024 Strategy based on the adoption of its priorities. Heads of State and Government champion and popularize the integration of STISA-2024 in national, regional and continental development policies, programmes and frameworks. The heads of state represent the countries and people as key stakeholders in STI. To strengthen and champion STISA-2024 at the continental level, a high-level Support Committee of at least six Heads of State and Government supported by high-level scientists/researchers from Africa and the Diaspora was to be formed to serve as STI Ambassadors. **Member States:** Member States mobilize funds, actively participate and contribute from the public, private, education and research,

societal, international development and funding sector stakeholders to implement the various initiatives emanating from STISA-2024 that could be tweaked to focus on youth employment.

Ministerial Conference for Coordination and Harmonization of Flagship Programs: It considers the STI demand from all sectors, it was deemed necessary to create over and above the current Conference of Ministers of the African Union, a coordination body responsible for examining the key sectors and flagship programs for the entire continent to facilitate harmonization. This body is chaired by the President of the STC on Education, Science and Technology and its members comprise all the chairs (with or without) the vice-chairs of all the other STC. This council will use the African Scientific, Research and Innovation Council- Scientific Technical Research Commission (ASRIC-STRC) as its main tool and meets every two or three years as required.

Specialized Technical Committee (STC) in charge of Education, Science and Technology: The African Union STC in charge of Education, Science and Technology will serve as a technical committee to advise the AU Heads of State and Government on Science, Technology and Innovation matters. The STC is responsible for establishing policies, strategic priorities and coherent, coordinated approaches for developing and implementing strategies for STI. The STC will exercise policy oversight and mobilize resources for the implementation of STISA-2024. The African Centres of Excellence (ACEs) and Pan African University (PAU) centres are playing a key role in developing the skills needed for innovation in Africa. The ACEs are a network of research and training institutions that are focused on developing capacity in specific areas of science, technology, and engineering. The PAU centres are a network of universities that are focused on providing education and training in science, technology, and innovation.

Regional Economic Communities (RECs): RECs mobilize funding and align regional STI and ICT plans to STISA by integrating the Strategy into other sectoral development plans and coordinating programme implementation at the regional level. They also coordinate with the AUC and NEPAD Agency in the implementation of the STI Strategy and submit implementation status reports bi-annually to the African Ministerial Council on Science and Technology (AMCOST). This platform can be very useful in pushing for the inclusion of the youth agenda.

African Union Development Agency (AUDA-NEPAD): through its Science, Technology and Innovation Hub (NSTIH), supports the technical implementation of the strategy and coordinates resource mobilization. Its specific roles will include: (a) mobilizing and directing technical expertise, including regional and continental networks of centres of excellence to implement the programmes and projects established as a result of this Strategy; (b) mobilizing financial resources for the provision of technical support to implement strategic programmes; (c) providing support to ASRIC-STRC in the development of national and regional strategies and action plans; (d) providing technical support to AU Commission's policy processes and activities.

African Scientific Research and Innovation Council (ASRIC): The ASRIC is a platform for the development of bankable programmes that address the key socio-economic development challenges in the continent. It acts as an operational unit of the Ministerial Conference for Coordination of Flagship Programs and supports RECs and the Member States with its expertise. ASRIC will not be a permanent organ and will meet bi-annually or annually depending on its regulations. The STRC, which is an existing specialized technical Office, will serve as the secretariat of ASRIC. On request from the African Union Commission (HRST Department), ASRIC-STRC can establish expert commissions to deliberate on the flagship program. As the secretariat of ASRIC, the STRC will also be responsible for the inventory of research institutions, plans, programs, and other activities belonging to the African Union and present a mapping to inform and establish a harmonization policy. ASRIC will submit an inception report through the AUC (HRST) to the Ministerial Conference for Coordination and Harmonization of Flagship Programs.

African Observatory of Science Technology and Innovation (AOSTI): AOSTI is a specialized Technical Office of the African Union mandated to serve as the continental repository for STI statistics and a source of policy analysis and capacity building for the Member States. It shall liaise with RECs and Member States in implementing STI programme measurement.

Pan-African University (PAU): PAU is the organ of the AUC for advanced graduate education and postgraduate research. Its five institutes (each of which will support at least ten Centres) were established in response to the demand for STI on the continent. Its research programs will systematically focus on addressing the key priorities identified in STISA-2024.

Pan African Intellectual Property Organisation (PAIPO): PAIPO is in the process of being established to implement AU policy in the field of Intellectual property. It will ensure the dissemination of patent information, provide technical and financial support to invention and innovation and promote the protection and exploitation of research results.

Private Sector and private foundations: The private sector works closely with public, education and research, societal, funding and national and international development agencies to facilitate technology transfer, collaborate in commercializing and exploiting research and innovation and support building the necessary capacities and technical competencies required to achieve the objectives of the STISA. The **Tony Elumelu Foundation** is a leader in African with the goal of empowering women and men across the continent, promoting economic growth, poverty eradication and ensure job creation. The Foundation, founded by African investor and philanthropist Tony O. Elumelu, represents commitment to creating a new generation of entrepreneurs through the investment company Heirs Holdings (TEF, 2022). The Foundation leverages its strong relationships in the public, private and development sectors to drive its mission of creating prosperity for all. In 2015, the Foundation launched the TEF Entrepreneurship Programme, a \$100 million commitment by Tony Elumelu to empower 10,000 African entrepreneurs over 10 years (TEF, 2022). Building on the Programme's success and its unique ability to identify, mentor and fund entrepreneurs across Africa, the Foundation is increasingly sharing its robust delivery platform and working in partnership with institutions such as the United Nations Development Programme, the African Development Bank, the International Committee of the Red Cross, GIZ, and United Bank for Africa Plc, to create meaningful and permanent impact across Africa. Thus far, the TEF has trained, mentored, and funded over 15,847 young African entrepreneurs across all 54 African countries through its Entrepreneurship Programmes, and provides capacity-building support, advisory and market linkages to over 1 million Africans through its digital networking platform, TEFConnect (TEF, 2022). The **Mastercard Foundation** seeks to improve the lives of people in developing countries by promoting access to education, financial services, and employment opportunities. One of the key areas that the foundation focuses on is promoting STI as a means of creating employment opportunities for young people. The foundation recognizes that young people are critical to realizing this potential. To this end, it has undertaken a number of initiatives aimed at promoting STI and creating employment opportunities for young people in Africa. The foundation's flagship initiative is the Young Africa Works program, which aims to support the creation of 30 million jobs for young people in Africa by 2030. In addition, the Mastercard Foundation is working to create networks and platforms that connect young African innovators and entrepreneurs with the resources and support they need to turn their ideas into successful businesses. Through initiatives like the African Entrepreneurship Award and the Youth Entrepreneurship Support Program, the foundation is providing funding, mentorship, and other forms of support to young African entrepreneurs working in the STI sector.

African Development Bank (AfDB): AfDB undertakes specific programs on STI and like the other partners, synergy and complementarity will be best achieved when AfDB programs are informed by and aligned with the continental strategy. Development Partners: Similarly, international, continental and national development partner institutions, including civil society and the media will support the implementation of the STI Strategy at all levels by providing financial and technical assistance and informing and aligning programmes to the goals of this Strategy. They will also play important multiplier roles in popularizing the importance of research and innovation in Africa's development.

African Export-Import Bank (Afreximbank): Afreximbank is a Pan-African multilateral financial institution mandated to finance and promote intra-and extra-African trade. Afreximbank deploys innovative structures to deliver financing solutions that support the transformation of the structure of Africa's trade, accelerating industrialization and intra-regional trade, thereby boosting economic expansion in Africa. The Bank has a rich history of intervening in support of African countries in times of crisis. Afreximbank is working with the AU and the African Continental Free Trade Agreement (AfCFTA) Secretariat to develop an Adjustment Facility to support countries in effectively participating in the AfCFTA. Given that Africa has one of the youngest populations in the world, AfCFTA has the potential to create millions of new jobs for young people in STI and entrepreneurship. To take advantage of this opportunity, however, young people will need to be equipped with the necessary skills and knowledge to compete in the new market. This is an opportunity for African governments and the private sector to invest in education and training programs for young people to tap into these upcoming opportunities. They also need to create an enabling environment that supports young people to start and grow businesses. This includes providing access to finance, reducing the regulatory burden, and creating an ecosystem that fosters innovation and entrepreneurship.

Regional and International Research Institutions: institutions with a regional or international mandate to perform research are encouraged to align their priorities to the strategy. They include but are not limited to: the Forum for Agricultural Research in Africa (FARA), the African Academy of Science (AAS), Association of African Universities (AAU), Organisation Africaine de la Propriété Intellectuelle (OAPI), African Regional Intellectual Property Organization (ARIPO), African Technology Policy Studies Network (ATPS), African Centre for Technology Studies (ACTS), African Economic Research Consortium (AERC) etc. They provide technical support for the implementation of STISA.

3.3 Country-Specific Findings

The sections that follow examine the STI stakeholders, their roles, linkages, power and influence in the STI ecosystem in each of the selected countries. Roles and linkages¹ are two ways to categorize STI stakeholders. These relationships can be formal or informal, and they can have a significant impact on the flow of information, resources, and decision-making in STI. The study also gauged the Power and Influence² of each stakeholder category. Power is more direct and tangible, while influence is more subtle and indirect. The strengths, weaknesses and current dynamics in the different countries have also been explored and reasons for success or failure were highlighted for each study country.

3.3.1 Ethiopia

Ethiopia has been among the fastest-growing economies in Africa since 2003. Innovation helps countries to move up the productivity, technology and value index. Innovation depends upon a wider system comprising diverse actors and their interaction, as well as the policy framework covering various policy domains. The National Innovation System (NIS) strongly shapes the country's technological development and innovation performance. Some of the key policies that promote technological development to enhance employability and job creation entail; the National Science, Technology and Innovation Policy of 2010, the Agricultural Development Led Industrialisation strategy (ADLI) of 1993, the National Energy Policy of 1994, Climate Resilient Green Economy Initiative 2011, Health sector transformation plan II 2021-2025 etc. The National Science, Technology and Innovation Council (NSTIC) is the regulatory body for Ethiopia's STI policy and action plan. Its key objective is to establish and coordinate the general strategy and framework for developing STI in the country. NSTIC is supported by key ministries, which are the main implementers of the STI policies in the country. The ministries also act as key funding agencies for public research institutions and intermediaries in the national research framework. Other funding sources come from international funders who mainly fund research activities in universities, private research institutes, private think tanks, and international research institutes in the country. The research input and outcome affect employment, especially amongst the youths and women, either directly or indirectly. The key stakeholders that play a critical role in STI and contribute to technological innovation, employability and entrepreneurship in Ethiopia are listed in Annex 1(a).

3.3.1.1 Key STI stakeholders' powers and influence in Ethiopia

There are many key Government actors drawn from Ministries, Departments and Agencies that play various roles in STI as well as in activities aimed at enhancing technological innovation, skills development, job creation as well as entrepreneurship covering different stakeholder groups. Some of those key roles include policymaking, regulatory and enforcement, and capacity building among others. Some have more power and influence than others.

¹ *Roles* refer to the specific function or responsibility of a stakeholder in the STI system. For example, roles played by researchers, policymakers, funding agencies, industry, and civil society organizations. *Linkages* refer to the relationships and interactions between different stakeholders in the STI system.

² *Power* in this context refers to the ability to control or make decisions, while *influence* refers to the ability to affect or sway those decisions. Power is often associated with formal authority, such as a position of leadership, while *influence* can be held by anyone, regardless of their formal role or position. Power is often used to achieve specific goals or outcomes, while *influence* is used to persuade or change the attitudes or behaviours of others. The stakeholders with high powers are able to control or direct others, enforce their own interests or make things happen. Those with high influence, on the other hand, have the capacity to shape the beliefs, attitudes, or actions of others without using coercion or force.

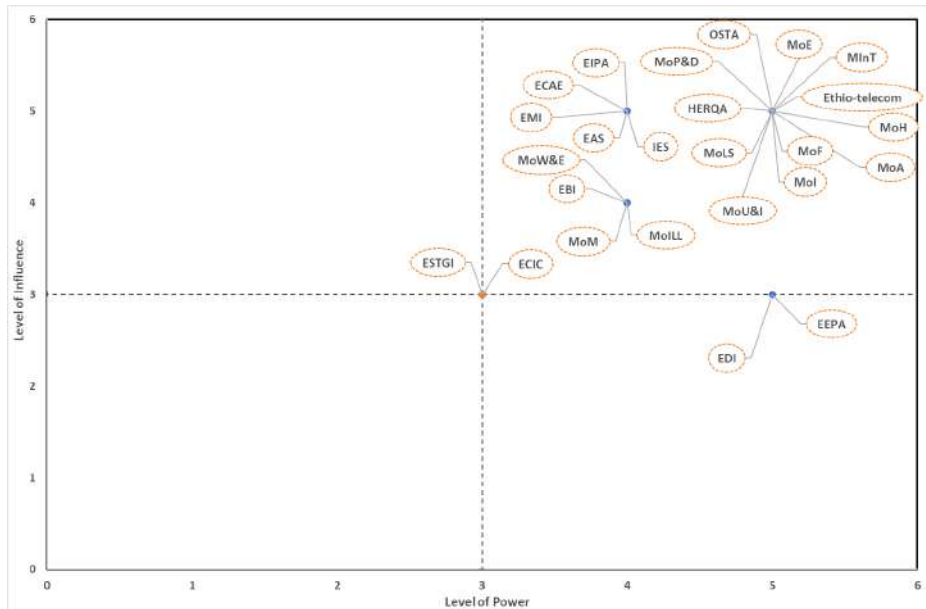


Figure 1: The level of Power and Influence among Government stakeholders in Ethiopia

Ministry of Innovation and Technology	MInT	Institute of Ethiopian Standards	IES
Oromia Science and Technology Authority	OSTA	Ethiopian Accreditation Service	EAS
Ministry of Finance	MoF	Ethiopian Conformity Assessment Enterprise	ECAE
Ministry of Industry	MoI	Ethiopian Metrology Institute	EMI
Ministry of Agriculture	MoA	Ministry of planning and Development	MoP&D
Ministry of Labour and Skills	MoLS	Ethiopian Environmental Protection Authority	EEPA
Ministry of Health	MoH	Ministry of Urban and Infrastructure	MoU&I
Ministry of Water and Energy	MoW&E	Ministry of Mines	MoM
Ethiopian Space Technology and Geo-spatial Institute	ESTGI	Entrepreneurship Development Institute	EDI
Ministry of Education	MoE	Ministry of Irrigation and Low Land	MoILL
Higher Education Relevance and Quality Agency	HERQA	Ethiopian Biodiversity Institute	EBI
Ethiopian Intellectual Property Authority	EIPA	Ethiopian Chemical Industries Corporation	ECIC

Figure 1 shows different **government actors** having different levels of power and influence as shown in the graph. The Ministry of Innovation and Technology (MInT), Ministry of Education (MoE) among other key ministries in the priority sector, are the most powerful and influential. Key agencies such as Oromia Science and Technology Authority, Higher Education Relevance and Quality Agency and Ethio-Telcom are also the most powerful and equally influential among government stakeholders in Ethiopia according to the key respondents' perceptions at the time of the study. Ethiopian Space Technology and Geo-spatial Institute (ESTGI) and Ethiopian Chemical Industries Corporation (ECIC) are arguably the least powerful or influential among government stakeholders. Ethiopian Environmental Protection Authority (EEPA) and Entrepreneurship Development Institute (EDI) are the most powerful but moderately influential.

Amongst **research institutions**, all the mapped actors are powerful and influential and fall in the top-right quadrant of the power-influence grid except for Armaur Hansen Research Institute (AHRI), Southern Agricultural Research Institute (SARI), Ethiopian Forestry Development (EFD), Ethiopian Public Health Institute (EPHE) and Ethiopian Institute of Agricultural Research (EIAR) (Figure 3).

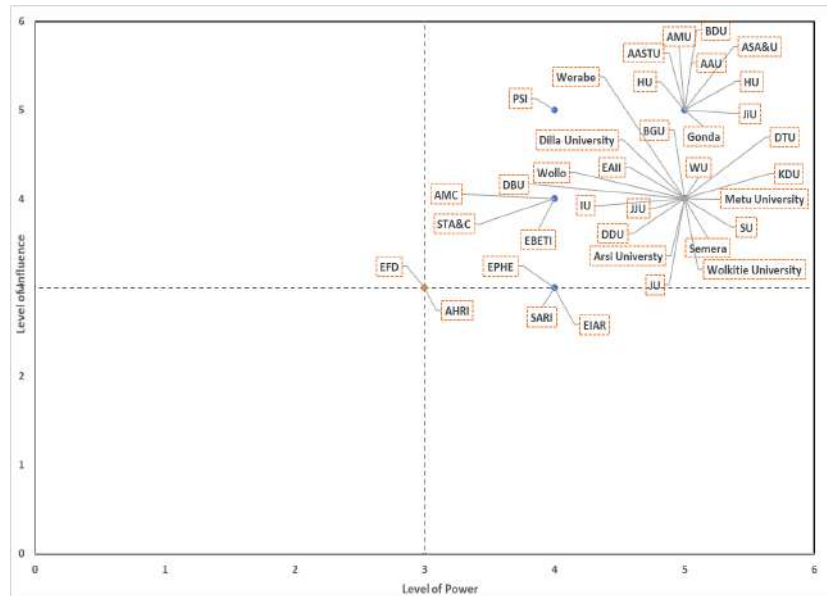


Figure 2: The level of Power and Influence among Research Institutions in Ethiopia

Addis Ababa University	AAU	Haramaya University	HU
Policy Studies Institute	PSI	Wachemo University	WU
Ethiopian Artificial Intelligence Institute	EAI	Dire Dawa University	DDU
Armaur Hansen Research Institute	AHRI	Kebri Dahar University	KDU
Jimma University	JiU	Jinka University	JU
Adama Science and Technology University	ASA&U	Bonga University	BGU
Addis Ababa Science and Technology University	AASTU	Injibara University	IU
Gondar University	Gonda	Selale University	SU
Arba Minch University	AMU	Debre Tabor University	DTU
Hawassa University	HU	Jijiga University	JJU
Bahir Dar University	BDU	Selam Technical and Vocational College	STA&C
Africa Medical College	AMC	Southern Agricultural Research Institute	SARI
Debre Berhan University	DBU	Ethiopian Forestry Development	EFD
Ethiopian Public Health Institute	EPHE	Ethiopian Bio and Emerging Technologies Institute	EBETI
Ethiopian Institute of Agricultural Research	EIAR		

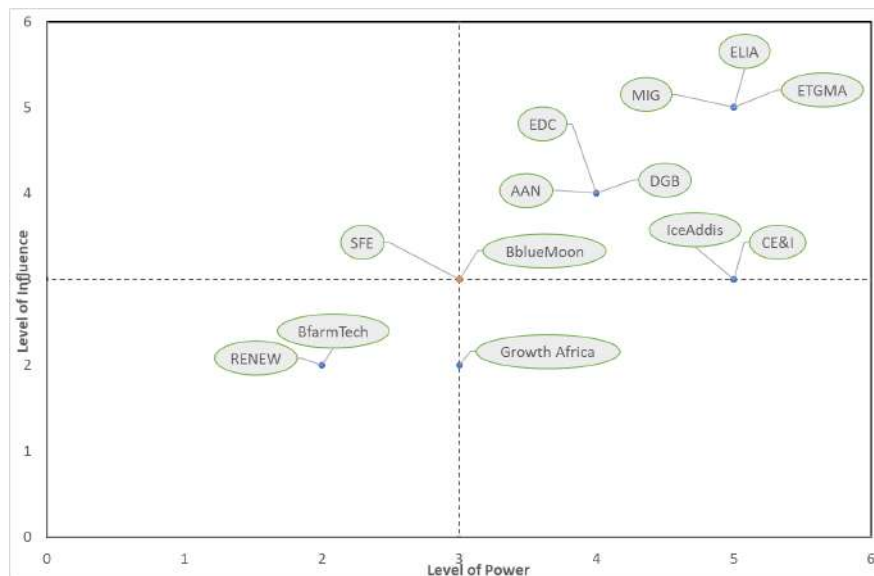


Figure 3: The level of Power and Influence among Private Sector Actors in Ethiopia

Center for Entrepreneurship & Innovation (St. Mary's University)	CE&I
Debut Global Bank	DGB
Addis Ababa Angels Network	AAN
Enterprise Development Center	EDC
Startup Factory Ethiopia	SFE
Ethiopian Leather Industries Association	ELIA
Ethiopian Textile and Garment Manufacturers Association	ETGMA
Midroc Investment Group	MIG

In Figure 3 the **private sector** actors have different power and influence levels. This can be attributed to their size, role and location in the country. The Ethiopian Leather Industries Association (ELIA), Ethiopian Textile and Garment Manufacturers Association (ETGMA) and Midroc Investment Group (MIG) are rated as the most powerful and influential while BfarmTech and RENEW are rated the least powerful and influential.

Figure 4 shows the power and influence grid amongst **NGOs and CSOs** in Ethiopia. The Ethiopian Chamber of Sectoral Associations (ECSA), Ethiopian Chamber of Commerce and Sectoral Associations (ECCSA) and Ethiopian Youth Entrepreneurs Association (EYEA) are perceived to be the most powerful and influential by the respondents. The rest of the institutions that were mapped in this category were rated low to moderately powerful or influential.

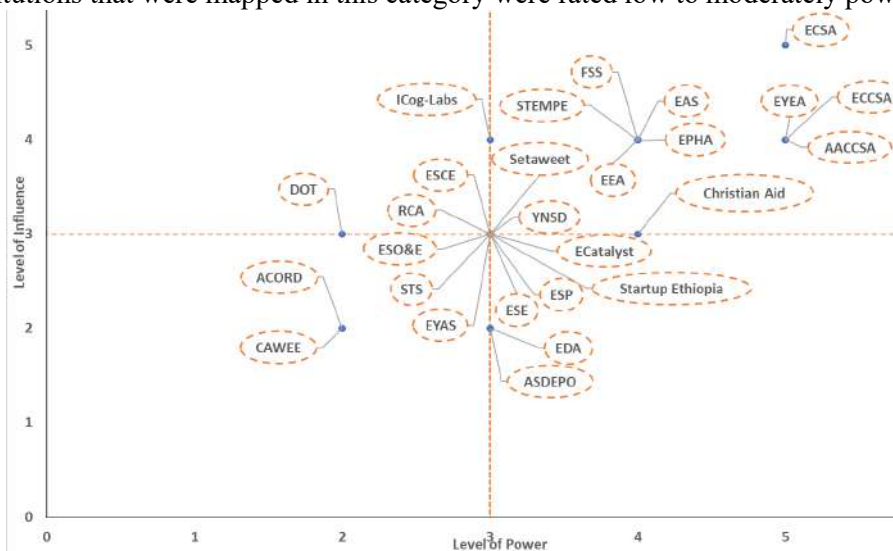


Figure 4: The level of Power and Influence among NGOs/CSOs Actors in Ethiopia

Ethiopian Academy of Sciences	EAS	Addis Ababa Chamber of Commerce and Sectoral Associations	AACCSEA
Society for Technology Studies	STS	Ethiopian Chamber of Sectoral Associations	ECSA
Emmanuel Development Association	EDA	Ethiopian Chamber of Commerce and Sectoral Associations	ECCSA
Ethiopian Young Academy of Sciences	EYAS	Ethiopian Youth Entrepreneurs Association	EYEA
Reach for Change Africa	RCA	Ethiopian Public Health Association	EPHA
The Ethiopian Society of Physics	ESP	Youth Network for Sustainable Development	YNSD
The Ethiopian Society of Chemical Engineers	ESCE	Action for Social Development and Environmental Protection Organization	ASDEPO
The Ethiopian Society of Electrical engineers	ESE	STEM Power Ethiopia	STEMPE
Digital Opportunity Trust	DOT	Ethiopian Economics Association	EEA
ACORD Ethiopia	ACORD	Ethiopia Society of Mechanical Engineers	ESO&E
Center for Accelerated Women's Economic Empowerment	CAWEE	Forum for Social Studies	FSS

3.3.1.2 Best practices for stakeholders in Ethiopia

-Revision of the STI Policy in March 2022 creating a favourable STI ecosystem for job and wealth creation: The objectives of the Policy include creating a system for building human resource that will play a key role in industrial activities; building infrastructure for science and technology research and innovation; promoting the leadership role of the private sector in innovation and technology development; promoting a culture of innovation; strengthening linkages among innovation stakeholders; strengthening international cooperation; and putting in place the legal and administrative frameworks necessary for STI system building. A guideline is being developed for the implementation of the STI Policy. The guideline will put in place a framework for the development of an implementation plan for the Policy and identifies the plan's main focus areas. It is also expected to serve as a guide to the work of the various implementing bodies.

-Enhanced synergies amongst various stakeholders: The identification of bottlenecks in various technological innovation development in Ethiopia is mainly flagged by public institutions jointly with key stakeholders. The federal ministries have well-organized hierarchical structures that are present at the granular level. For instance, in agricultural innovations, the trained staff from the institutions provide technical support to farmers. Those that can't be handled at the granular level are escalated to upper-structure personnel with more expertise. Furthermore, these institutions also disseminate improved agricultural technologies and knowledge to the farmers through their extension systems (Chichaybelu et al, 2021). This ensures that technological innovation development in the agricultural sector is enhanced to promote employability, job creation, and food security.

-Formation of multi-stakeholder platforms: Stakeholder platforms in Ethiopia were necessitated initially out of the need for technology promotion (Chichaybelu et al, 2021). Technology promotion cannot stand alone without the support of other key players whose input would strengthen the success of technological promotion in the country. This idea is what birthed the formation of multi-stakeholder platforms that aimed to fill the potential gaps that emanated from viewing things from a single lens. An example of a multi-stakeholder platform is the chickpea stakeholders' innovation platform which is composed of major stakeholders along the value chain. The platform members are drawn from (a) the agricultural research system, (b) public institutions that support agricultural development, (c) seed producers, (d) farmers' primary cooperatives and unions, (e) entities working on bio-fertilizer and storage management, (f) food processors and (g) exporters. The composition of the platform has also expanded by including universities, private entities working on post-harvest handling, and bio-fertilizer production centres. In addition to the members at the establishment, their coming together has made it easy to hold discussions that address major gaps in the chickpea value chain, propose solutions, and share and assign responsibilities among concerned stakeholders. The forum also emphasizes experience sharing among stakeholders through targeted presentations.

-Good coordination amongst key offices: The adoption of science, technology, and innovation under the Prime Minister's office was a fantastic idea that has proved to yield results. All the relevant ministries are easily whipped and called to action because of the nature of reporting to the highest office in the land. Other stakeholders such as universities in the technological value chain also have great synergies that enable them to work efficiently to enhance technological development, employability, and entrepreneurship in Ethiopia. For instance, Addis Ababa University (AAU) has an Industry Linkage and Technology Transfer Office (TTO), as well as an Office of Community Services, focused on implementing research outputs within the local community. Both Offices, together with the Research Office, fall under the same department, which allows for better coordination. The TTO's primary function is "the incubation of research ideas, identify Intellectual Property (IP), and provide support for prototype development to attract investors" (Teressa, 2022).

3.3.1.3 Challenges and Opportunities for effective contribution of Stakeholders to youth employment in Ethiopia

-Limited access to education and skills training: One of the primary challenges facing youth employment in Ethiopia is limited access to education and skills training. According to the World Bank (2021a), only 44% of youth aged 15-24 are literate, and only 22% of them have completed secondary education. The gross enrolment rates were 101.41%, 39.21% and 7.69% in primary, secondary and tertiary education respectively in 2019. The 70/30 enrolment policy has had a positive impact in STEM enrolment. The World Bank found that the policy has helped to create jobs in the STEM sector and has contributed to economic growth but then more needs to be done especially with regard to addressing the gender gap. The lack of education and skills training leaves many young people unprepared for the job market, limiting their employment opportunities. Investing in education and skills training for youth can help address the skills mismatch in the job market and improve employment opportunities. According to the World Bank (2021a), investing in education and skills training is critical for increasing productivity and competitiveness in the labour market.

-Dominance of the informal economy and lack of private sector growth: Most jobs in Ethiopia are in the informal economy, which is characterized by low productivity, low wages, and poor working conditions (ILO, 2018). Youth are often employed in this sector, which does not provide them with job security, benefits, or opportunities for career advancement. However, the contribution of the informal sector in the provision of jobs for youth and women is something worth noting and needs to be protected and facilitated to transition to formality. The private sector in Ethiopia is still underdeveloped, with limited job creation opportunities (World Bank, 2021b). This lack of private sector growth limits the employment opportunities available to youth, as most formal jobs are in the private sector. The government needs to put in place policies and incentives that will encourage private sector growth in Ethiopia. The government can support private sector development by improving the business environment, reducing regulatory barriers, and promoting foreign investment (World Bank, 2021b).

-Low growth in research capacity in universities: Universities are important spaces that promote transformative research for various societies. The rapid growth in the number of universities in Ethiopia is hardly matched by the growing research capacity. The research capacity is hampered by a lack of funding and lack of research support (DFID, 2019). Subsequently, most research in the country is undertaken by government-linked, non-academic organizations. Consequently, few researchers end up working in the business sector.

-Gender inequality: Women in Ethiopia face significant barriers to accessing employment opportunities, including limited access to education and training, as well as discriminatory social norms and practices (UNDP, 2019). They

not only lack the economic opportunities that allow them to engage in alternative income-generating activities but they also lack alternative income sources that left them dependent on their spouse, and non-participant party in the decision-making of their household (Mulugeta et. al 2022). This gender inequality further exacerbates the challenges facing youth employment. This challenge significantly impacts negatively on the fight against ambitions for gender equality and inclusion. According to the United Nations Development Programme (UNDP) (2019), empowering women through education and training, promoting gender equality in the workplace, and addressing discriminatory social norms can all help improve employment opportunities for youth, including young women. This is an opportunity for civil society and NGOs to put more effort into educating society on the benefits of gender equality in all aspects. The media also needs to take the lead role in advocating for gender equality and inclusion thereby ensuring equality in access to resources and opportunities.

-Lack of meaningful data to determine factors that spur innovation: Understanding the role of innovation in the growth and development of the Ethiopian economy needs to be backed up by meaningful data. Unfortunately, this has not been the case in Ethiopia. A lot of empirical studies conducted by research institutions aimed at enhancing enterprise innovation have propelled concepts that have worked in other countries but failed to realize the same impact in Ethiopia (Adebowale et al, 2014). This could be attributed to the difficulty of generalizing successful concepts abroad and having the same impact in a local context in a developing country. For instance, Stojčić and Hashi (2014) went against the pre-existing notion at the time by revealing that cost factors affect product innovations but do not necessarily affect process innovations. The study further reveals that firm size fosters new process innovations while it hinders new product innovations. The generation of context-specific data especially in Ethiopia would greatly help avert such misconceptions and find ways to foster enterprise innovation in the country resulting in enhanced youth employability and technological innovation development.

3.3.2 Ghana

Ghana's population is projected to reach 51 million by 2050, with the youth (aged 15-34) accounting for 35% of the total population (UNDP, 2018). This presents an opportunity for stakeholders to invest in young people's education, training, and entrepreneurship to harness their potential and contribute to the country's development. Several stakeholders, including the government, private sector, academia, and civil society organizations have contributed to the development of STI policies and initiatives aimed at creating employment opportunities for the youth. Ghana has several policies and institutions that promote technological development and innovation to enhance employability and job creation. The Digital Transformation Agenda for Ghana, launched by the Ministry of Communications, is one such policy that seeks to leverage technology to promote socio-economic development. This agenda aims to create an enabling environment for the growth of the digital economy, enhance digital literacy, and promote e-commerce, among others. The backbone for STI development in Ghana is the National Science, Technology and Innovation Policy of 2017 and the Coordinated Program of Social and Economic Development program (CPSEDP). Other institutions critical to the implementation of STI include the Ministry of Environment, Science, Technology and Innovation (MESTI) responsible for formulating and implementing policies related to STI. MESTI is responsible for coordinating STI activities across the government and ensuring that they align with national development priorities.

Council for Scientific and Industrial Research (CSIR) is Ghana's main science and technology research institution. They conduct research in areas such as agriculture, industry, and health, among others. The CSIR also provides technical advice and support to government and industry. The National Science and Technology Policy Committee (NSTPC) is responsible for advising the government on matters related to science, technology, and innovation policy. They also oversee the implementation of the Ghana National Science, Technology and Innovation Policy. Ghana Atomic Energy Commission (GAEC) is a research institution that focuses on the peaceful applications of nuclear science and technology. Ghana Standards Authority (GSA) is responsible for developing and promoting standards in Ghana while Ghana Investment Promotion Centre (GIPC) is responsible for promoting investment in Ghana. They work with government and industry to identify investment opportunities and provide support to investors. The key STI stakeholders in Ghana and their roles are provided in Annex 1(b).

The study identified linkages among actors in the STI ecosystem of Ghana as to how it affects the core focus of entrepreneurship, job creation, and youth employability. The study identified that the private sector in Ghana maintains a weak link with the research and government STI stakeholders. The strong linkage between the international donor agencies and the private STI stakeholder was identified as the main driver of entrepreneurship, job creation, and youth employability. For interaction among key STI stakeholders, it was discovered that there still exists weak links between the government and the research institutions, a deeper analysis reveals that the government

institutions established for specific purposes have strong interlinkage with the government. This scenario exists due to the policies that drive funding of the research institution thus creating a direct link with the oversight arm of the government for such research institutions. For example, the CSIR is strongly linked to the MESTI and the Ministry of Food and Agriculture because the policies of the oversight ministries demand funding for CSIR. The linkage between the government and private research institutions is still weak and needs to be strengthened to support youth employability, job creation, and entrepreneurship. The review established weak interlinkages between the stakeholders, but there is a noticeable increase in the number of private sector actors (incubation hubs). The research sector is readapting its practices through Technical Vocational Education Training (TVETs). During KIIs and FGD, feedback received showed that inadequate dialogue forums affected the synergy between the private actor, researchers, and the government. The respondents mentioned the issue of funding and lack of basic infrastructure as destabilizing factors to increased stakeholder involvement in the STI landscape. They also showed that to effectively utilize STI for entrepreneurship and job creation, there is need for increase capacity building for the main actors in the space which is currently lacking.

3.3.2.1 Key STI stakeholders' powers and influence in Ghana

From the KIIs and FGDs, stakeholders' power and influence in the STI landscape were rated as it relates to entrepreneurship and job creation in Ghana. This was done across the five (5) main categories of stakeholders working in the STI landscape which include government, non-governmental organizations, private sector actors, research institutions, and media. The power and influence of these stakeholders are presented below across the various stakeholder categories.

From Figure 5 the analysis of the level of power and influence for the stakeholder in the **government institutions** category shows that the Ministry of Environment, Science, Technology and Innovation (MESTI), Ministry of Trade and Industry (MTI), Ministry of Food and Agriculture (MFA) had the highest power and influence, while the National Board for Small Scale Industry (NBSSI), Ghana Free Zones Board (GFZB), and Rural Enterprises Programme of Ghana (REP) had the least power and influence.

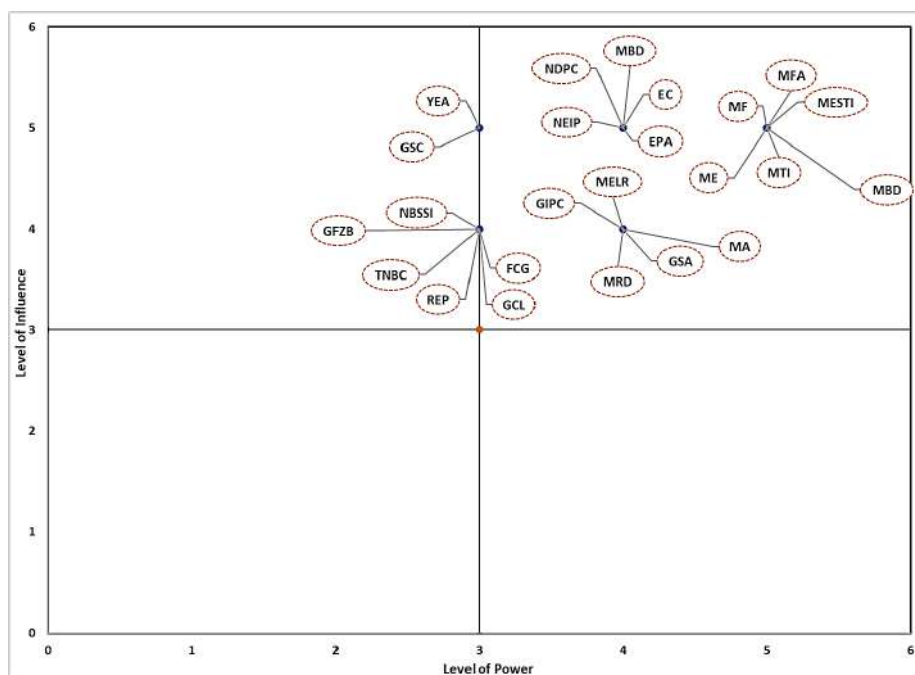


Figure 5: The level of Power and Influence among Government stakeholders in Ghana

Ministry of Environment, Science, Technology and Innovation	MESTI	National Board for Small Scale Industry	NBSSI
National Development Planning Commission	NDPC	Ghana Free Zones Board	GFZB
Environmental Protection Agency	EPA	Ghana Investment Promotion Centre	GIPC
Ministry of Trade and Industry	MTI	Ghana Standard Authority	GSA
Ministry of Business Development	MBD	Ministry of Energy	ME
The Nation Builders Corps	TNBC	Ghana Skill Centre	GSC
Ministry of Aviation	MA	Youth Employment Agency	YEA
Ministry of Employment and Labour Relations	MELR	National Entrepreneurship and Innovation Programme	NEIP
Ministry of Railway Development	MRD	Energy Commission	EC
Ministry of Food and Agriculture	MFA	Rural Enterprises Programme	REP
Ministry of Finance	MF	Forestry Commission of Ghana	FCG

Amongst **Research Institutions**, (Figure 6), the Council for Scientific and Industrial Research (CSIR) and Kwame Nkrumah University of Science and Technology (KNUST) had the highest power and influence among the research organization, while the Centre for Business Development (CBD) and Centre for Entrepreneurship and Innovation Development Ghana (CEID) had the least power and influence. The position of the CSIR was not surprising as it is an institution that is fully funded by the government and thus coordinates activities around STI for entrepreneurship skills and job creation to benefit the youths.

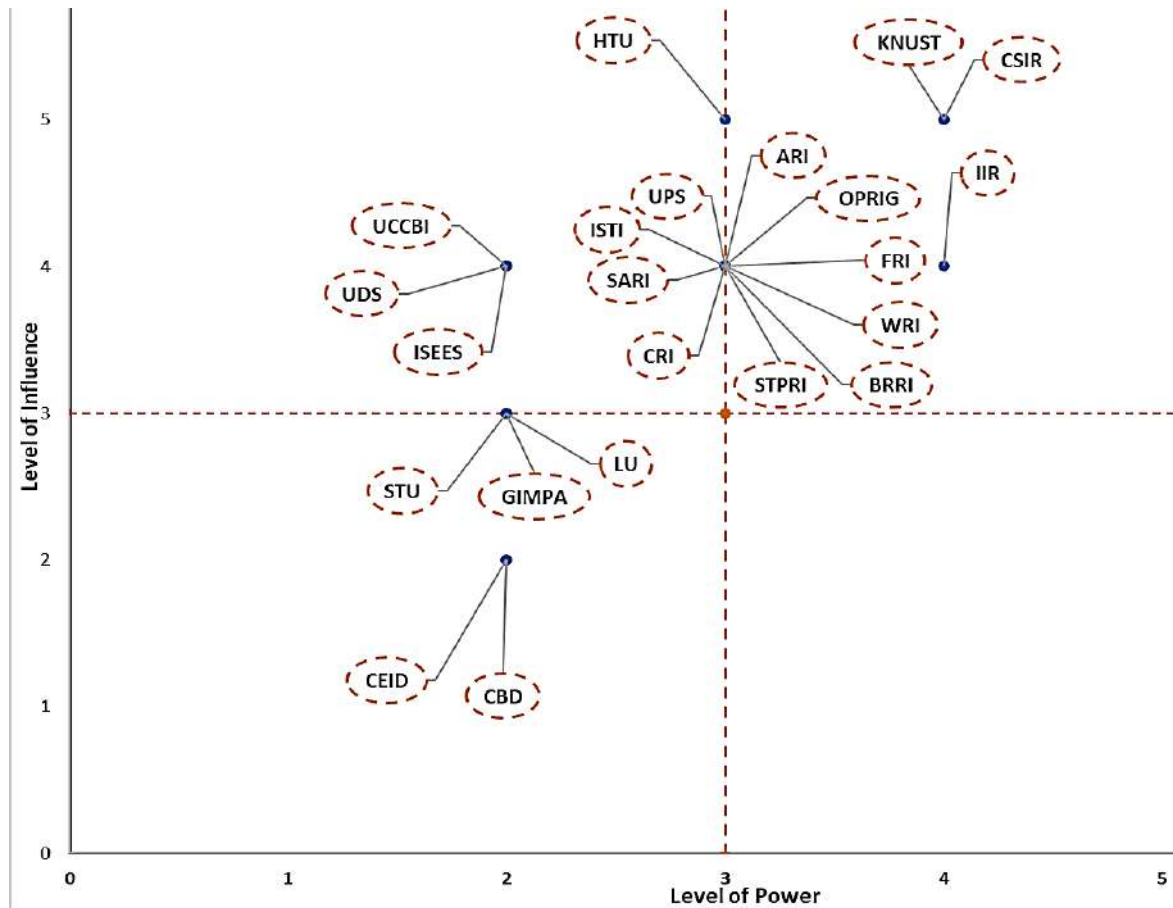


Figure 6: The level of Power and Influence among Research Institutions in Ghana

Council for Scientific and Industrial Research	CSIR	Ho Technical University	HTU
Institute for sustainable Energy and environmental solutions	ISEES	Sunyani Technical University	STU
Oil Palm Research Institute, Ghana	OPRIG	University for Development Studies	UDS
Food Research Institute	FRI	Centre for Entrepreneurship and Innovation Development	CEID
Crops Research Institute	CRI	Centre for Business Development	CBD
Water Research Institute	WRI	Ghana Institute of Management and Public Administration	GIMPA
Savannah Agricultural Research Institute	SARI	University of Cape Coast Business Incubator	UCCBI
Animal Research Institute	ARI	Lancaster University	LU
Institute of Industrial Research	IIR	Kwame Nkrumah University of Science and Technology	KNUST
Institute of Scientific and Technological Information	ISTI	Science and Technology Policy Research Institute	STPRI
Building and Road Research Institute	BRRRI	University of Professional Studies	UPS

In the **private sector** actors’ category, the feedback from the key informants as seen in Figure 7 shows that the Association of Ghana Industries (AGI) had the highest power and influence while the Grassroot Hub, Steward Investment (SI), Business and Entrepreneur Development Centre (BEDC) and the Eqwip Hub (EH), had the lowest power and influence. Generally, the private sector actors wield low power and with some having low to moderate influence in Ghana.

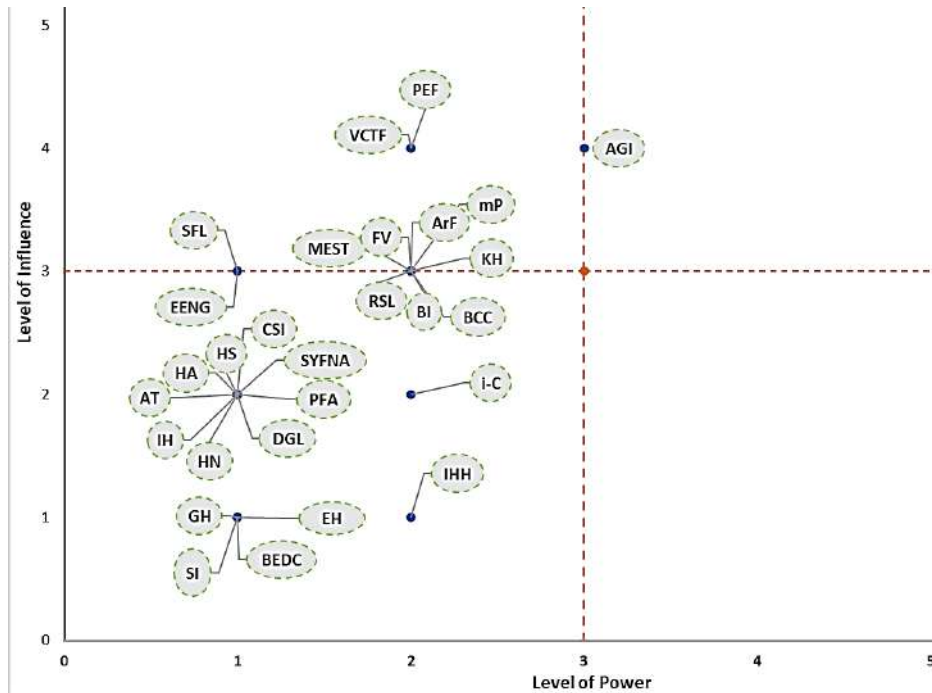


Figure 7: The level of Power and Influence among Private Sector Actors in Ghana

Peasant Farmers Association	PFA	Ho Node	HN
Savanah Young Farmers Network Agribusiness	SYFNA	Hopin Academy	HA
Innovation Hub (iHub)	IHH	i.Code	i-C
Centre for Social Innovations	CSI	Business & Entrepreneur Development Centre	BEDC
Dansyn Ghana Limited	DGL	Impact Hub	IH
Enablis Entrepreneurial Network Ghana	EENG	Kumasi Hive	KH
Private Enterprise Foundation	PEF	Steward Investment	SI
Venture Capital Trust Fund	VCTF	SkyFox Ltd	SFL
Meltwater Entrepreneurial School of Technology.	MEST	Rancard Solutions Ltd	RSL
Eqwip Hubs	EH	BlueCrest College	BCC
Grassroots Hub	GH	mPedigree	mP
HapaSpace	HS	Busy Internet	BI
AirtelTigo	AT	Afrifanom formerly Vokaform	ArF
Association of Ghana Industries	AGI		

Figure 8 shows that the Alliance for Green Revolution in Africa (AGRA) was rated moderately powerful and had a high rating in terms of influence, while the Ghana Life Savers organization (GLSO) and the Informed Choice Foundation of Ghana (ICFG) had the least power and influence among the NGOs/CSO stakeholders. Most of the other actors in this category were rated highly influential but less than moderately powerful.

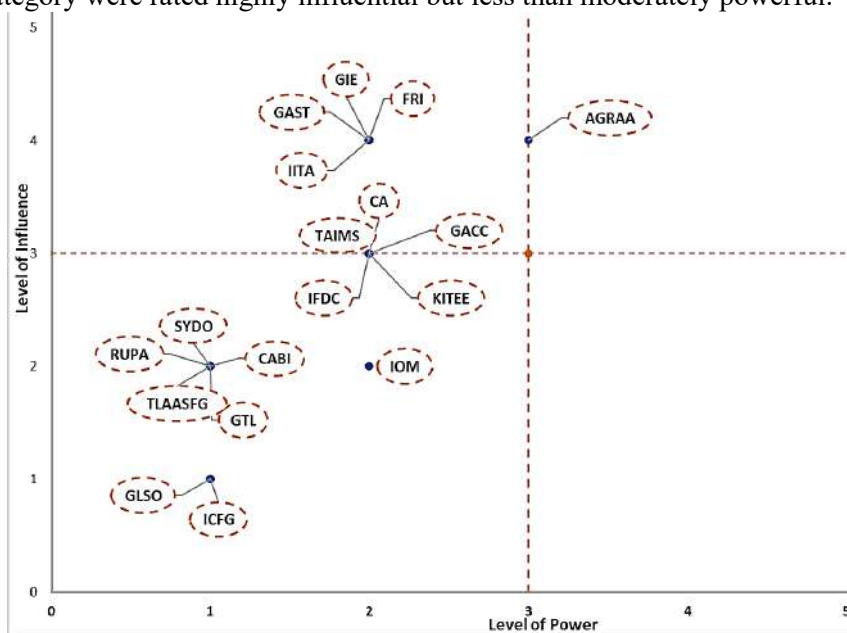


Figure 8: The level of Power and Influence among CSOs and NGOs in Ghana

Ghana Alliance for Clean Cookstoves	GACC	The African Institute for Mathematical Sciences	TAIMS
Kumasi Institute of Technology, Energy and Environment	KITEE	The Linda Agyeiwaa Atiase Scholarship Fund for Girls	TLAASFG
Farm Radio International	FRI	Sports and Youth Development Organization	SYDO
Centre for Agriculture and Bioscience International	CABI	Ghana Life Savers Organization	GLSO
International Fertilizer Development Center	IFDC	Informed Choice Foundation Ghana	ICFG
Alliance for a Green Revolution in Africa, Accra	AGRA	International Organization on Migration	IOM
International Institute of Tropical Agriculture	IITA	Rural-Urban Partnership for Africa	RUPA
Chamber of Agribusiness	CA	Ghana Association of Scientists Teachers	GAST
Ghana Institution of Engineering	GIE	Ghana Tech Lab	GTL

3.3.2.2 Best practices for stakeholders in Ghana

-Increased Skill Acquisition Centres Setup by Government: More specialized government centres dedicated to the delivery of entrepreneurship education and training exists, focusing on youth development with special attention given to women and girls. For instance, the Ghana Skill Center which is a Government of Ghana (GoG) skills development initiative for the youth promotes artisanal skills, employability skills, and entrepreneurship skills. Another government stakeholder is the Nation Builders Corps (NABCO) programme which is a government initiative to address graduate unemployment to solve social problems. The focus of the initiative will be on solving public service delivery in health, education, agriculture, technology, and governance, and driving revenue mobilization and collection. The programme attracts youth ambassadors who are willing to be trained in relevant skills. The government plays a major role in driving youth employability programmes, entrepreneurship for innovation and job creation. For the government category, their strengths included making and implementing policies, facilitating collaborations, fund mobilization and allocation, infrastructure provision, and proposing legislative reviews.

-Increased Human Resources and Infrastructure: The strengths of higher education institutions are greater human resources capacity for education and training in several areas such as engineering, governance, entrepreneurship, and technology development. In addition, the higher education institutions had strengths for research and technology development and have infrastructure in the form of office space, laboratories, and ICT facilities. Specific research centres focused on entrepreneurship and the development of employability skills targeting youths, women, and girls. The Kwame Nkrumah University of Science and Technology, Kumasi is currently running a youth employment and job creation programme for students in all disciplines to increase self-reliance after graduation.

-Enabling Policies and Programmes targeting Entrepreneurship and Job Creation: The main strength of incubation and innovation hubs (private) lies in their capacities to incubate entrepreneurs and small businesses from the stage of idea to market. The hubs provide tailor-designed pieces of training to entrepreneurs and small businesses to help them develop their ideas into products and services and to start and grow their businesses. The incubation and innovation hubs identified a wide variety of opportunities, among them favourable government policies, programmes and interventions such as the National Entrepreneurship and Innovation Programme, Business Development Programme, Business to Business (B2B) matching, available donor funding for SDGs-related business, building young talent locally to localized externally procured technology and services. Others are developing the business aspect of tourism and Leveraging on Double Track System to design programmes for SHS graduates, Tech parks, and zoning out part of Accra as a spatial niche for innovators Coding for children. AfCFTA has been identified as an opportunity - a major single market for goods and services to foster intra-regional trade, thus assisting the private stakeholders to thrive. The private stakeholders provide tailor-designed pieces of training to entrepreneurs and small businesses to help them develop their ideas into products and services and to start and grow their businesses.

-Increased Awareness through the Influence of International Partners/Donor Agencies: The influence of international partners has led to increased awareness of the need to support the development of entrepreneurship skills, increase youth employability and women's enrolment and participation in Science Technology Engineering and Mathematics (STEM). The 5-year strategic framework between Ghana and the United Nations targets the achievement of SDGs. This strategic framework has the component of reducing unemployment through the development of entrepreneurship skills. The 5-year strategic framework known as the United Nations Sustainable Development Partnership 2018-2022 (UN-SDP) assisted in ensuring the government defines pathways to meeting the SDG goals. The result of this partnership is that government ministries and parastatals are establishing skill acquisition centres to assist youth and women develop skills for the future, thus reducing unemployment. The Government of Ghana is partnering with European Commission and UNDP to improve the activities of ministries, departments, and parastatals. The IDRC and other donor agencies are providing counterpart funding for research institutes; this will support the provision of research infrastructure necessary to support entrepreneurship development. Some condition put in place by these donor agencies ensures equitable partnership among all

stakeholders. Sometimes the prerequisite for receiving funding is for research institutes to have partnerships with the government and private sector.

3.3.2.3 Challenges and Opportunities for effective contribution of Stakeholders to youth employment in Ghana

-Weak Interlinkages among Stakeholders: Among the research organizations, two weaknesses were paramount, namely weak linkages to the private sector and the inability to secure funding for research and development activities mostly from the government. The issue of weak linkages between the research and private sector in Ghana has been a major problem militating against the successful transformation of research output and technology in research to products and services. Despite the challenge of weak interlinkages among stakeholders in the STI ecosystem in Ghana, there are still opportunities for collaborations. These opportunities include spurring of innovation as stakeholders seek new and innovative ways to work together to create solutions to the problem. This can lead to the creation of new businesses, jobs and increased economic growth. Also, opportunities for the specialization of stakeholders in their respective areas of expertise could increase, thereby creating niches for businesses and individuals to provide specialized services and products. Also, technology and digital platforms present an opportunity for stakeholders to reach and engage among themselves and with young people. According to the Ghana Statistical Service (2020), over 39% of Ghanaians have access to the Internet, and there has been an increase in the use of mobile technology for financial transactions and other services. This presents an opportunity for stakeholders to leverage technology and digital platforms to provide joint training, mentorship, and other support to young people.

-Difficulties in securing funding: For the private sector, securing funding support for start-ups was a major weakness. Except for a few hubs, centres were weak in funding their start-ups. Weaknesses among stakeholders in the private sector include changing the narrative about entrepreneurship among the youth, lack of the ability to diversify sources of funding through innovative approaches, weak linkage to R&D institutions, and limited capacities in critical areas. This challenge has also created opportunities for creative problem-solving and innovative financing solutions. For instance, entrepreneurs and startups have been forced to think outside the box and explore alternative sources of funding, such as crowdfunding, peer-to-peer lending, and impact investing. Additionally, this challenge has encouraged collaboration and partnerships among stakeholders, including public-private partnerships and industry-academia partnerships, to leverage resources and create sustainable financing models. There are opportunities for stakeholders to leverage innovative financing mechanisms to support youth employment in Ghana. For example, the African Development Bank (2019) has launched the Youth Entrepreneurship and Innovation Multi-Donor Trust Fund to support innovative approaches to youth entrepreneurship and employment in Africa.

3.3.3 Kenya

Kenya has a diverse range of stakeholders who are working to enhance technological innovation development, employability, entrepreneurship, and job creation for the youth. These stakeholders include the government through various ministries and parastatals. They have been keen on developing policies and implementing programs that support youth employment and entrepreneurship. The private sector has been playing a critical role in supporting youth employment and entrepreneurship through training, mentorship, and financial support to youth who are interested in starting their businesses. Civil society organizations have also weighed in on the matter by providing training, mentorship, and access to resources to youth who are interested in starting their businesses. Research institutions research on a variety of topics that are relevant to the needs of youth, such as emerging technologies, such as artificial intelligence, blockchain, and robotics which have the potential to create new jobs and opportunities for youth. These stakeholders are working together to create a more supportive environment for youth employment and entrepreneurship in Kenya. These efforts are helping to create more opportunities for youth to succeed in the workforce and to start their own businesses. The stakeholders in technological innovations, employability and entrepreneurship in Kenya are listed in Annex 1 (c).

3.3.3.1 Key STI stakeholders' powers and influence in Kenya

Utilizing STI for job creation, skill development, and entrepreneurship is seriously impacted by the power and influence exercised by the key STI stakeholders. Below, we discuss the responses from our key informants in light of five groups of STI stakeholders active in Kenya's STI ecosystem.

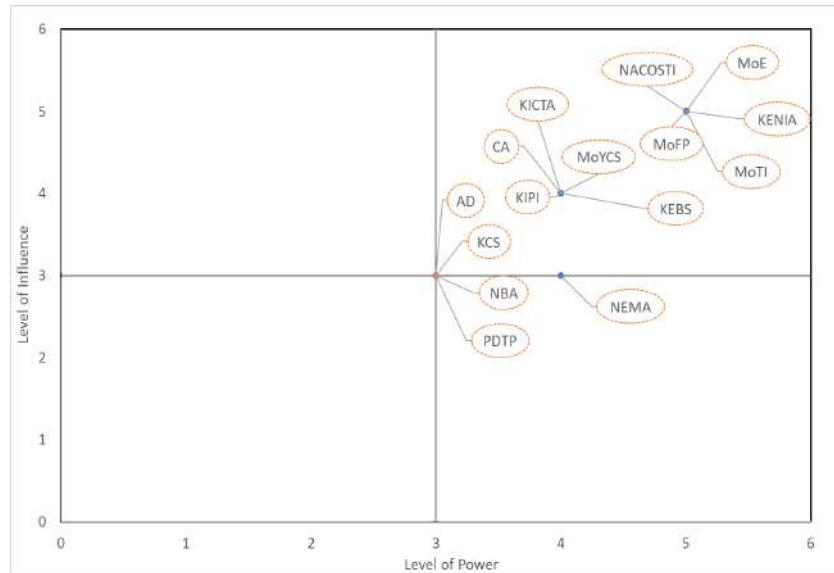


Figure 9: The level of power and influence among Government stakeholders in Kenya

Ministry of Education	MoE	National Commission of Science, Technology and Innovation	NACOSTI
Ministry of Finance and Planning	MoFP	Kenya Communications Secretariat	KCS
Ministry of Trade and Industry	MoTI	Communications Authority	CA
Ministry of Youth, Culture and Sports	MoYCS	Presidential Digital Talent program	PDTP
Kenya National Innovation Agency	KENIA	Ajira Digital	AD
Kenya Industrial Property Institute	KIPI	National Environment Management Authority	NEMA
Kenya Bureau of Standards	KEBS	National Biosafety Authority	NBA
Kenya ICT Authority	KICTA		

In Figure 9, the analysis of the level of power and influence for **government stakeholders** shows that the Ministry of Education (MoE), Ministry of Finance and Planning (MoFP), Ministry of Trade and Industry (MoTI), Kenya National Innovation Agency (KENIA) and National Commission of Science, Technology and Innovation (NACOSTI) have the highest power and influence among the government STI stakeholders or institutions. On the other hand, Kenya Communications Secretariat (KCS), Presidential Digital Talent Program (PDTP), Ajira Digital (AD) and National Biosafety Authority (NBA) had the lowest power and influence among the category of government actors in the STI ecosystem. The relatively low score of the government institutions could be attributed to the high-level indulgence that makes them have minimal interaction with the public.

Figure 10 shows that Kenya Industrial Research and Development Institute (KIRDI) has the highest power and influence among the **research stakeholders**, while Nairobi Design Thinking School and Local Development Research Institute have the lowest level of power and influence. Most of the institutions were rated to be moderate in terms of their power and influence.

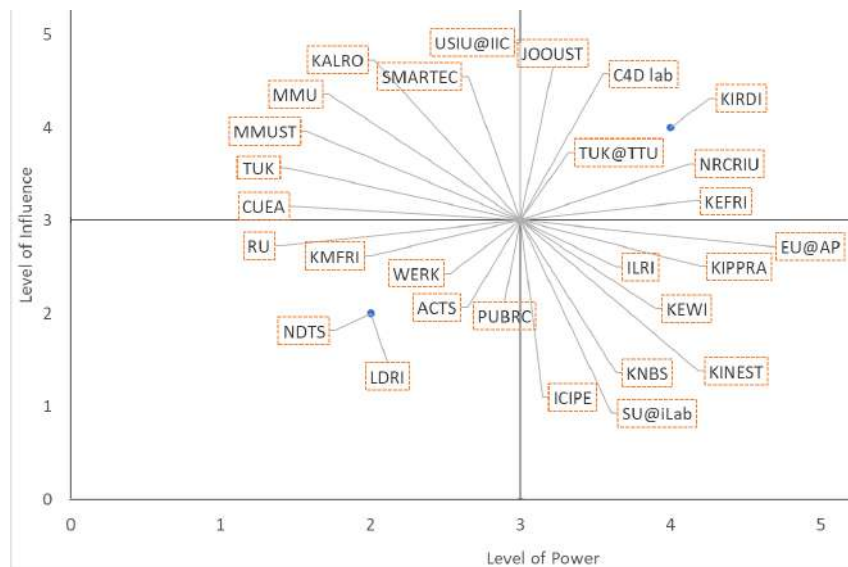


Figure 10: The level of power and influence among Research Institutions in Kenya

Kenya Industrial Research and Development Institute	KIRDI	Riara University	RU
Kenya Institute for Public Policy Research and Analysis	KIPPRA	Multi-media University	MMU
Kenya National Bureau of Statistics	KNBS	Technical University of Kenya	TUK
Kenya Institute of Nuclear Science and Technology	KINEST	Kenya Forestry Research Institute	KEFRI
Strathmore University @iLabAfrica	SU@iLab	International Livestock Research Institute	ILRI
University of Nairobi @C4D lab	C4D lab	Kenya Marine and Fisheries Research Institute	KMFRI
USIU-Africa@Innovation incubation centre	USIU@IIC	International Centre for Insect Physiology and Ecology	ICIPE
The Catholic University of East Africa @IBM	CUEA	Kenya Water Institute	KEWI
Egerton University @Agro Park	EU@AP	Women Educational Researchers of Kenya	WERK
Technical University of Kenya @Technology Transfer	TUK@TTU	African Centre for Technology Studies	ACTS
Kenyatta University @Chandaria business innovation and incubation centre	NRCRIU	Local Development Research Institute	LDRI
Nairobi Design Thinking School	NDTS	Pwani University Bioscience Research Centre	PUBRC
Kenya Agricultural and Livestock Research Organization	KALRO	Jaramogi Oginga Odinga University of Science and Technology	JOUST
Sustainable Materials Research and Technology Centre	SMARTEC	Masinde Muliro University of Science and Technology	MMUST

The **private sector** in Kenya is vibrant and plays a critical role in the STI landscape. Figure 11 shows that most innovation Hub such as Nairobi Garage (NG), Akirachix (AX), iLab Africa (iLab) and Gearbox (GBX) were rated the highest when it came to power and influence. They were joined at the top by Kenya Private Alliance Sector Alliance (KEPSA). Afrika Youth Space (AYS), the Organic Farmer (TOF), Eldohub (EH) and Mashinani Hub (MH) have the lowest level of power and influence.

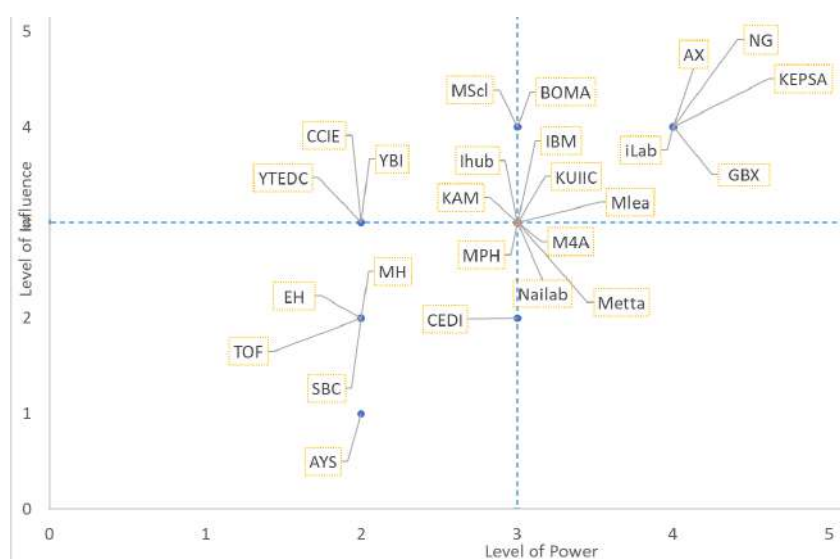


Figure 11: Level of power and influence among Private Sector Actors in Kenya

Kenya Manufacturers Association	KAM	IBM Research Africa	IBM
Kenya Private Sector Alliance	KEPSA	Kenyatta University's Innovation and Incubation Center	KUIIC
IHub	Ihub	Nairobi Garage	NG
Gearbox	GBX	mLab East Africa	Mlea
88 mph	MPH	The BOMA Project	BOMA
Metta	Metta	The Nailab	Nailab
iLab Africa	iLab	Centre for Enterprise Development and Innovation	CEDI
Mashinani Hub	MH	SBC Network	SBC
EldoHub	EH	Youth Talent & Enterprise Development Centre	YTEDC
Moringa School	MScI	The Organic Farmer	TOF
Akirachix	AX	Afrika Youth Space	AYS
Sinapis	YBI	Microsoft 4Africa	M4A
Cytonn College of Innovation and Entrepreneurship	CCIE		

There are many **NGOs** and **CSOs** in Kenya, but the critical ones identified to support technological innovations, skills development, job creation and entrepreneurship were rated as shown in Figure 12. Green Belt Movement (GBM) was rated to have the highest power and influence. Subsequently, Ambassadors Development Agency (ADA), Windle International-Kenya (WIK), Kenya Voluntary Development Association (KVDA), Christian Mission Aid (CMA), African Refugee Training and Employment Service (ARTES), African Council for Communication Education (ACCE), Africa Rehabilitation and Education Program (AREP), Help Self Help Centre (HSHC), Technoserve Kenya (TK), Kenya Water for Health Organization (KWHO), Limuru Girls Centre (LGC), HEVA Fund, The Kenya Association of Music Producers (KAMP), Permanent Presidential Music Commission (PPMC) and Media for Environment, Science, Health and Agriculture in Kenya (MESHA) have the lowest level of power and influence.

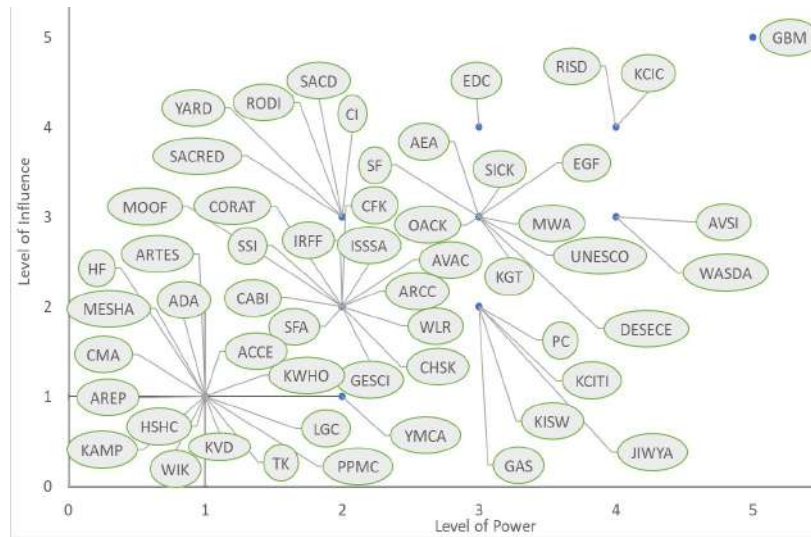


Figure 12: The level of Power and Influence among NGOs and CSOs in Kenya

Kenya Climate Innovation Centre	KCIC	Kenya Voluntary Development Association	KVDA
STEM Impact center Kenya	SICK	Population Council	PC
The United Nations Educational, Scientific and Cultural Organization	UNESCO	Windle International -Kenya	WIK
Global E -Schools and Communities Initiatives Kenya	GESCI	Africa Alliance of YMCAs	YMCA
The International Service for the Acquisition of Agri-biotech Applications	ISSSA	Sustainable Agriculture Community Development Program	SACD
CORAT Africa	CORAT	Green Africa Society	GAS
CFK Africa	CFK	Green Belt Movement	GBM
ASHOKA East Africa	AEA	Kenya Christian Industrial Training Institute	KCITI
Centre for Agriculture and Bioscience International	CABI	Muslim Women Association	MWA
Safaricom Foundation	SF	Rural Initiative for Sustainable Development	RISD
Centre for Health Solutions in Kenya	CHSK	Kenya Gatsby Trust	KGT
Equity Group Foundation	EGF	International Service Volunteers Association	AVSI
Media for Environment, Science, Health and Agriculture in Kenya	MESHA	African Regional Centre for Computing	ARCC
Science for Africa Foundation	SFA	Entrepreneurship Development Centre	EDC
The Association of Visual Artists and Collectives	AVAC	Wajir South Development Association	WASDA
Permanent Presidential Music Commission	PPMC	Sight Savers International (Royal Commonwealth Society for The Blind)	SSI
The Kenya Association of Music Producers	KAMP	International Relief Friendship Foundation	IRFF
HEVA Fund	HF	Kenya Institute of Social Work	KISW
Limuru Girls Centre	LGC	Julikei International Women and Youth Affairs	JIWYA
Kenya Water for Health Organization	KWWHO	Resource Oriented Development Initiatives	RODI
Technoserve Kenya	TK	Development Education Services for Community Empowerment	DESECE
Caritas Italiana	CI	Sustainable Agriculture Centre for Research and Development in Africa	SACRED
Help Self Help Centre	HSHC	Organic Agriculture Center of Kenya	OACK
Africa Rehabilitation and Education Program	AREP	Youth Action for Rural Development	YARD
African Council for Communication Education	ACCE	Mount Kenya Organic Farming	MOOF
African Refugee Training and Employment Service	ARTES	Wild Living Resources	WLR
Christian Mission Aid	CMA	Ambassadors Development Agency	ADA

The **media institutions** in Kenya (Figure 13) are organized in groups. Respondents rated Nation Media Group (NMG), Radio Africa Group (RAG), Standard Group (SG) and Royal Media Services (RMS) highest in terms of power and influence. This could be attributed to their presence countrywide and some of the Corporate Social Responsibility (CSR) programmes that they undertake with a keen focus on youth development and the publicity they give to some of the innovations that are produced by the youth. Multi-Choice (DSTV) had the lowest level of power and influence.

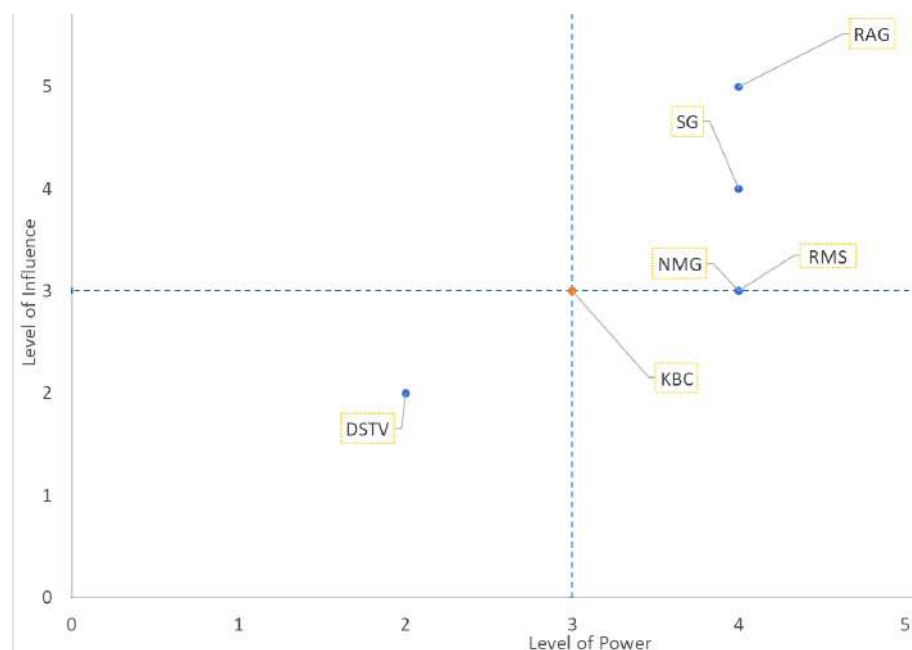


Figure 13: The level of Power and Influence among Media Actors in Kenya

Nation Media Group	NMG	Royal Media Services	RMS
Radio Africa Group	RAG	Multi choice	DSTV
Standard Group	SG	Kenya Broadcasting Corporation	KBC

3.3.3.2 Best practices for stakeholders in Kenya

-Defined roles of stakeholders in STI implementation: The existence of a multi-stakeholder approach to digital economy implementation is to be lauded. Various stakeholders have taken up key roles such as Private sector enterprises as the primary drivers of the digital economy across digital infrastructure, financial services, platforms, entrepreneurship, skills, and values. The efforts put by the stakeholders have enabled the creation of several jobs that have helped reduce the high unemployment rates. The Government has also played its role by developing necessary policies and legislation to support the development of the digital economy. A secretariat to implement a digital economy has been set up to provide strategic oversight for the effective implementation of a digital economy. The secretariat coordinates all necessary inputs and resources necessary for the effective delivery of the digital economy since its membership comprises key entities that implement various aspects that enhance technological innovation development and job creation.

-Creation of group-specific funds: State actors such as Kenya ICT Authority a major stakeholder in Kenya's technological development and job creation commissioned grants that can help grantees tap into the massive opportunities in the technological innovation sector. The Tandaa Digital Content grant issues grants of up to USD 50,000 to companies and USD 10,000 to individuals for the development of innovative web and mobile phone applications (iHub Research, 2016). The availability of similar grants across multiple agencies will not only solve the major problem that youths and startups face, which is a lack of seed capital, but will also contribute to the creation of several job opportunities for youths.

-Offering internship and apprenticeship programs: To fill the skills gap in the country to enhance entrepreneurship and job creation, stakeholders in technological innovation development have rolled out internship and apprenticeship programs. Internships offer early exposure to students and provide them with practical experience to supplement their studies. In addition, interns can support organizations that lack the resources to hire full-time employees. Finally, internships allow organizations to identify high-performing individuals that fit with the culture and values of the organizations. Similarly, apprenticeship programs may allow employers to assess a person's fit with the organization before committing to a long-term contract while simultaneously allowing young employees to gather valuable professional experience. Apart from the opportunities given in the private sector, the government of Kenya through the Public Service Commission (PSC) publishes 6 months' opportunities to the youth who have just graduated to sharpen their skills and give them appropriate work experience that will enhance their employability across various sectors. This initiative bridges the gap between academia and practice, providing the necessary skills for youths to create or obtain employment opportunities.

3.3.3.3 Challenges and Opportunities for effective Stakeholder contribution to job creation in Kenya

-Poorly established National Research Fund (NRF): Alongside the NACOSTI and KENIA, NRF was established by the STI Act of 2013 to mobilize and manage financial resources for R&D. NRF's activities cover research grant calls categorized as postgraduate research grants that are aimed at alleviating the problem of ageing scientists; multidisciplinary support grants that targeted the establishment of links between different R&D actors and organizing technology transfer; and infrastructural support grants that targeted "state of the art" research infrastructures prioritized by NACOSTI. Through co-funding research programmes, NRF has managed to strategically partner in transformative innovation policy programmes such as Horizon 2020 of the European Union. So far NRF has achieved very little compared to what it is mandated to do. This could be attributed to several factors such as conflict of interest and excessive political interference, and lack of adequate human resource capacity. Rampant corruption has also negatively impacted the efforts made in securing research funds. This is evidenced by the low score of 31 points on the Corruption Perception Index (CPI). The government and relevant stakeholders, particularly those familiar with management or research councils, should provide training to improve institutional management and fundraising skills. With adequate funding, NRF can be devolved so that young innovators from across the country can take advantage of the funding opportunities that NRF will provide.

-Constraining application requirements: Despite the availing of funds for specific groups as seed capital, the funds' application has been marred with complaints. In particular, the requirement of some funds of a group application process, which requires applicants to partner with others and possess assets to qualify for the loan program, has always proved to be constraining. Furthermore, groups from urban areas are more likely to receive the funds as compared to their counterparts from rural areas. This continues to increase the disparity between the two regions, disenfranchising many youths from entrepreneurship and employment opportunities. Institutions that provide seed capital to innovators should have experts on staff who can assess the feasibility of solo applicants' proposals and fund them if they meet the criteria for scaling. Furthermore, the funding institutions may consider taking a stake in the venture for a period of time until the enterprise can buy them out. This will address the collateral issue, which is preventing funds from being disbursed.

-Lack of awareness and high cost of obtaining Intellectual Property Rights (IPR): Many young innovators are unaware that KIPRI exists. Many innovators have difficulty distinguishing between different rights and determining where to go for clarification. The fact that KIPRI offices are only found in Nairobi makes it difficult for young innovators in other parts of the country to access their services, making it too expensive to even try. As a result, many innovators are afraid to share their ideas, even with potential donors, for fear of having their ideas stolen. KIPRI must develop awareness programs that will make them, and their services known to young people. It would be interesting to investigate how IPR can be taught not only in universities and colleges but also in TVETs, so that youths leave these institutions knowing how to approach IPR. It will also be beneficial for KIPRI to ensure that its services are devolved so that they can be accessed from government agencies such as Huduma centres or county commissioners' offices in areas where Huduma centres are not available.

3.3.4 Nigeria

Nigeria accounts for about half of West Africa's population with approximately 210 million people and one of the largest populations of youths in the world. The STI development is Nigeria's catalyst for increased human capital development with the population of youth. The National Research and Innovation Council (NRIC) comprises the President and Federal Ministers from sectoral ministries with connections to STI. NRIC is mandated to set national priorities on research and development and set and coordinate STI activities in line with national priorities. The NRIC is also responsible for the establishment of new research institutes and the strengthening of existing ones. NRIC facilitates fundraising activities to support innovation activity in alignment with national priorities. National Council on Science, Technology and Innovation (NCSTI) sets broad directions to coordinate STI activities in line with national priorities, monitors the activity of public STI agencies and is responsible for the dissemination of outputs from scientific research while the State Science, Technology and Innovation Council (SSTIC) provides leadership and direction for STI activity at a state level, promote science education and disseminate STI information, align policies and programmes with those of the NRIC, promote and implement decisions and programmes of NCSTI. The key STI stakeholders in Nigeria and their roles are discussed in Annex 1 (d).

Each stakeholder's role was presented to provide insights into their activities to enhance youth employability, job creation and entrepreneurship. Nigeria has a complex institutional framework for research that operates across various government levels. There appear to be overlaps between the roles and responsibilities of organisations within the Nigerian STI system that create inefficiencies and complexities for researchers. For example, while the STI Policy

lists both NCSTI and SSTIC as key stakeholders within the STI system, it appears that their roles are largely similar with both councils responsible for STI coordination. Major interactions exist between the government and the research institutions but there was a one-way interaction from the government to the research in terms of funding of research institutions. There were noticeable interlinkages between research and research focusing on staff exchanges and mentors to augment where there are shortfalls in personnel and skill. The private sector had weak links with the research and government stakeholders. Some researchers have modified their systems to key into the TVET programme due to the pressures from regulators or funding agencies' demands. There was a noticeable increase in the number of government TVET centres associated with ministries or agencies of government. There are weak linkages between the government and the private sector; government provides funding for SMEs to drive production.

3.3.4.1 Key STI stakeholders' powers and influence in Nigeria

The power and influence exercised by the key STI stakeholders have a serious effect on the use of STI in driving technological innovations for job creation, skills for development, and entrepreneurship. The responses from key informants interviewed are discussed below according to five categories of STI stakeholders working in STI ecosystem in Nigeria.

The level of power and influence for the **government stakeholders** is shown in Figure 14. The Federal Ministry of Science and Technology, Ministry of Agriculture and Rural Development, and Ministry of Communication and Digital Economy of Nigeria have the highest power and influence, while the Ministry of Labour and Employment and Ministry of Environment were rated moderately powerful and less influential. The lowest-rated actor was the National Biosafety Management Agency (NBMA).

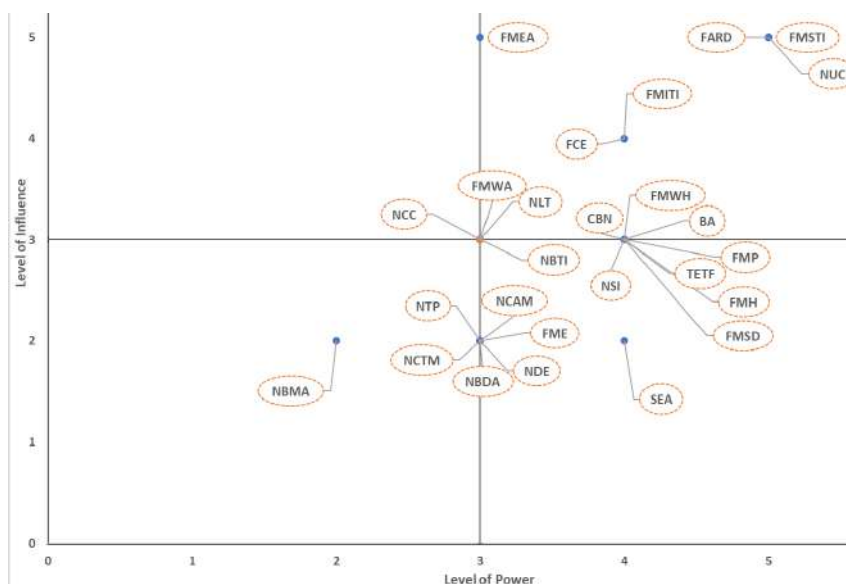


Figure 14: The level of Power and Influence among Government stakeholders in Nigeria

Federal Ministry of Science, Technology and Innovation	FMSTI	National University Commission	NUC
Federal Ministry of Agriculture and Rural Development	FARD	National Board for Technology Incubation	NBTI
Federal Ministry of Mines and Steel Development	FMSD	Federal Ministry of Women Affairs	FMWA
Federal Ministry of Environment	FME	Nigerian Communication Commission	NCC
Federal Ministry of Health	FMH	National Biosafety Management Agency	NBMA
Federal Ministry of Education Abuja	FMEA	National Centre for Technology Management	NCTM
Federal Ministry of Power	FMP	Tertiary Education Trust Fund	TETF
Federal Ministry of Works and Housing	FMWH	National Agency for Science and Engineering Infrastructure	NSI
Federal Ministry of Communications and Digital Economy	FCE	National Centre for Agricultural Mechanization	NCAM
Bank of Agriculture	BA	National Directorate of Employment	NDE
Central Bank of Nigeria	CBN	Federal Ministry of Industry, Trade and Investment.	FMITI
Small and Medium Enterprises Development Agency	SEA	National Office for Technology Acquisition and Promotion	NTP
National Institute of Leather Science and Technology	NLT		
National Biotechnology Development Agency	NBDA		

Figure 15 shows that the Raw Materials Research and Development Council (RMRDC) has the highest power and

influence among the stakeholders working in the **research** ecosystem, while the Institute of Petroleum Studies, University of Port Harcourt had the lowest level of power and influence. RMRDC may have had the highest level of power and influence because of being a government research institution directly under the Ministry of Science and Technology.

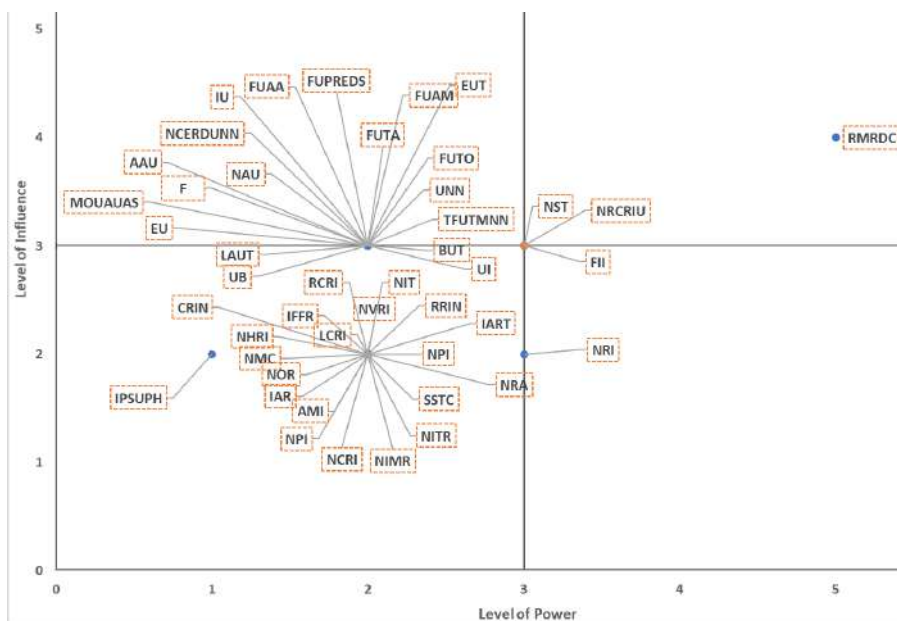


Figure 15: The level of Power and Influence among Research Institutions in Nigeria

Nigerian Institute of Science Laboratory Technology	NST	Lake Chad Research Institute	LCRI
Federal Institute of Industrial Research, Oshodi	FII	Institute for Agricultural Research	IAR
National Centre for Energy Research & Development, University of Nigeria Nsukka.	NCERDUNN	Institute of Agricultural Research and Training	IART
The Federal University of Technology Minna, Niger state Nigeria	TFUTMNN	National Cereal Research Institute	NCRI
Bells University of Technology	BUT	Root Crop Research Institute	RCRI
Enugu State University of Science and Technology	EUT	National Horticultural Research Institute	NHRI
Federal University of Petroleum Resources, Effurun, Delta State	FUPREDS	Nigerian Store Product Research Institute	NPI
Michael Okpara University of Agriculture, Umudike, Abia State.	MOUAUAS	Rubber Research Institute of Nigeria	RRIN
Cocoa Research Institute of Nigeria	CRIN	Nigerian Institute for Oil Palm Research	NOR
National Research Institute of Chemical Technology	NIT	National Animal Production Research Institute	NPI
National Root Crops Research Institute, Umudike	NRCRIU	National Veterinary Research Institute	NVRI
Federal University of Agriculture, Makurdi	FUAM	Institute for Freshwater Fisheries Research	IFFR
Federal University of Agriculture, Abeokuta	FUAA	National Institute for Medical Research	NIMR
Igbinedion University	IU	University of Benin	UB
Edo University	EU	Federal University of Technology, Owerri, Imo State	FUTOIS
Ambros Ali University	AAU	University of Nigeria, Nsukka	UNN
Federal polytechnic	F	University of Ibadan	UI
Nigerian Building and Road Research Institute	NRI	Ladoke Akintola University of Technology	LAUT
Sheda Science and Technology Complex	SSTC	Nnamdi Azikiwe University	NAU
National Mathematical Centre	NMC	Institute of Petroleum Studies, University of Port Harcourt	IPSUPH
National Space Research and Development Agency	NRA	Agricultural and Rural Management Training Institute	AMI
Nigerian Institute for Trypanosomiasis Research	NITR	Federal University of Technology, Akure.	FUTA
Raw Materials Research and Development Council	RMRDC		

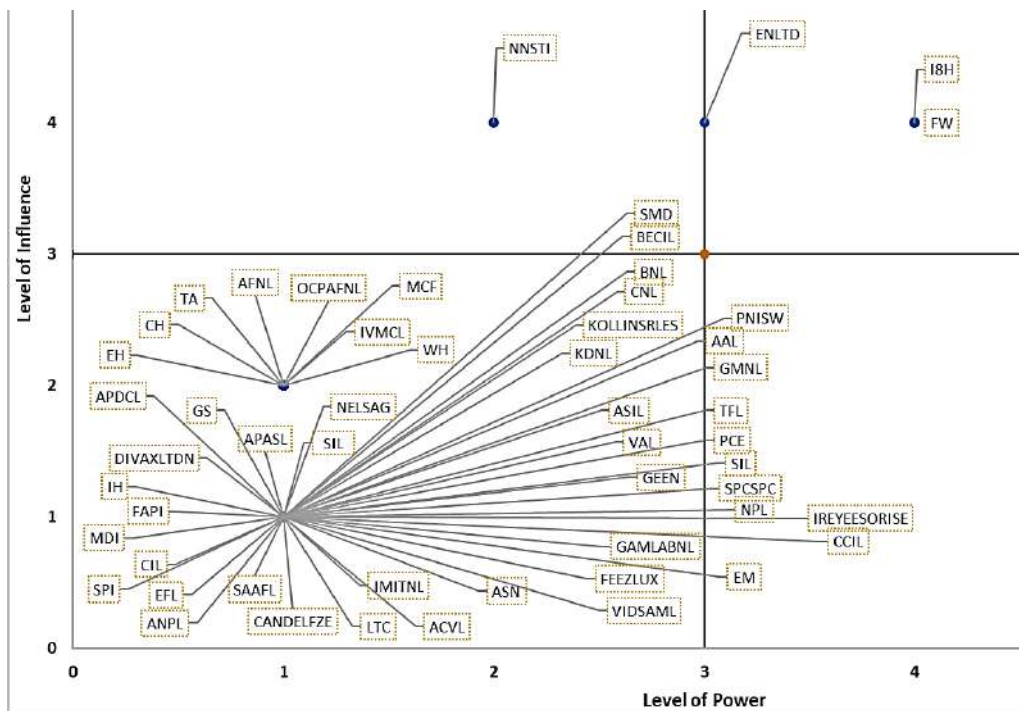


Figure 16: The level of Power and Influence among Private Sector Actors in Nigeria

enspire Hub	EH	FEEZLUX Concept Nigeria Enterprise	FEEZLUX
Wennovation Hub	WH	GAMLA and Brewtech Nigeria Limited	GAMLABNL
Lookman Technical Company	LTC	Cresol Chemical Industries Ltd.	CCIL
Shoe Making Directorate	SMD	Golden Empress Enterprises Nigeria	GEEN
Brithtence Electronics Company International Ltd.	BECIL	Innov8 Hub	IH
Nomagbon Pharmaceuticals Limited	NPL	Vertex Agro Ltd	VAL
Sonic Paint Industry Ltd	SPI	AbodSuccess Investment Ltd.	ASIL
P.N.I Solar World	PNISW	Kuban Danbal Nig Ltd	KDNL
Master Chemicals & Fertilizer	MCF	Moringa Doublequick Investment	MDI
Innoson Vehicle Manufacturing Co. Ltd.	IVMCL	NELSAG Enterprises International Ltd.	NELSAG
OCP Africa Fertilizers Nigeria Limited	OCPAFNL	A& Shine Nigeria	ASN
Ayoola Foods Nigeria Ltd	AFNL	IREYEESORISE DRY SPICES Ltd	IREYEESORISE
Thrive Agric	TA	VIDSA Multiventures Ltd	VIDSAML
Flutterwave	FW	Spectra Industries Ltd	SIL
Nation Newspaper's STI desk	NNSTI	IMIT Nigeria Ltd	IMITNL
Across Atlantic Limited	AAL	DIVAX LTD Nigeria	DIVAXLTDN
Spectra Industries Ltd	SIL	Agro Park Development Company Limited	APDCL
Goshen Marbles Nigeria Ltd	GMNL	Erisco Food Ltd	EFL
Chiajulu Nigeria Ltd	CNL	AgriCapital Ventures Limited	ACVL
Service Pharmaceutical Company (SPC)	SPCSPC	AgroPlus Africa Systems Limited	APASL
Ewu Monastery	EM	Green Sahara	GS
CANDEL FZE	CANDELFEZE	KOLLINS - RLES GLOBAL LIMITED	KOLLINSRLES
Co-creation Hub	CH	Peecom & Co Enterprise	PCE
Tiger Foods Ltd.	TFL	Colossus Investment Ltd	CIL
Belphins Nigeria Ltd.	BNL	Sona Agro Allied Foods Ltd	SA AFL
Avuco Nutritional Products Ltd	ANPL	Educare Nigeria LTD	ENLTD
Fumman Agricultural Product Industry	FAPI	Innov8 Hub	I8H

Figure 16 shows that Flutter Waves, Sara Agro chemicals, and Conga had the highest power and influence among the stakeholders listed by the respondents working in the **private sector**, while Quake-Hive and Innov8 Hub had the lowest level of power and influence in that ecosystem.

Figure 17 shows the level of power and influence amongst **NGOs/CSOs** in Nigeria. The Rural Farmers Hub had the highest power and influence while the Azama Development Foundation, Life Builders and Jigawa Reconnect had the lowest Power and Influence among the NGOs/CSOs in Nigeria

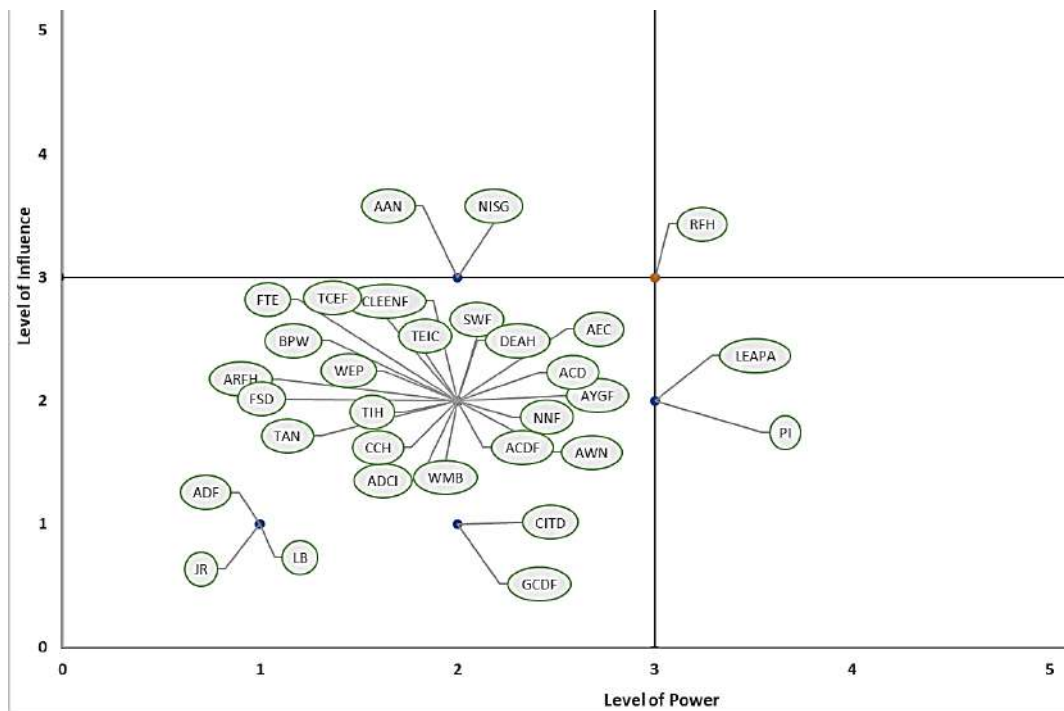


Figure 17: The level of Power and Influence among CSOs and NGOs in Nigeria

- | | | | |
|--------------------------------------------------------|--------|---------------------------------------------------|------|
| Nigeria Innovation Summit Group | NISG | Guidance Community Development Foundation | GCDF |
| Rural Farmers Hub | RFH | Foundation for Skills Development | FSD |
| Association of Professional Women Engineers of Nigeria | AWN | The Courage Education Foundation | TCEF |
| Angels Discovery Circle Initiative | ADC | New Nigeria Foundation | NNF |
| Sought After Women and Children Foundation | SWF | Accord for Community Development | ACD |
| Association for Reproductive and Family Health | ARFH | Africa Citizens Development Foundation | ACDF |
| Africa Youth Growth Foundation | AYGF | ActionAid Nigeria | AAN |
| CLEEN Foundation | CLEENF | Co-Creation Hub | CCH |
| Tender Arts Nigeria | TAN | The Innovation Hub | TIH |
| Friends of The Environment | FTE | iDEA Hub | DEAH |
| Plan International | PI | The Entrepreneurship and Innovation Centre | TEIC |
| Access to Education for Children | AEC | Women Environmental Program | WEP |
| Business and Professional Women | BPW | Life Builders | LB |
| Women in Management and Business | WMB | Centre for Information Technology and Development | CITD |
| LEAP Africa | LEAPA | Jigawa Reconnect | JR |
| Azama Development Foundation | ADF | | |

Figure 18 shows the stakeholders' power and influence among the **media**. Respondents rated the Nations Newspaper, the Guardian Newspaper, and Thursday Newspaper had the highest level of power and influence among the Media and Development Partners, while Heifer International had the least power and influence in the space.

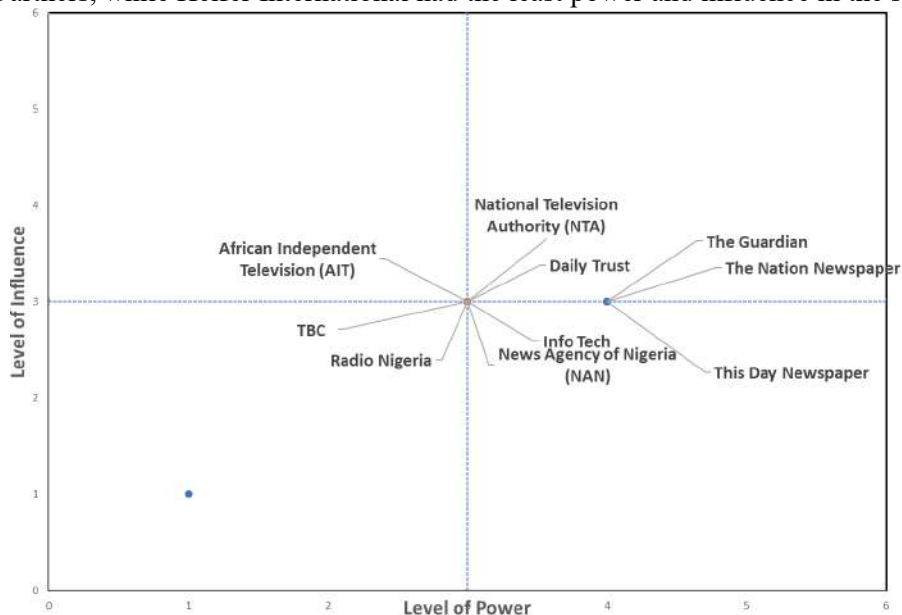


Figure 18: The level of Power and Influence among the Media in Nigeria

3.3.4.2 Best practices for stakeholders in Nigeria

-Increasing the number of research institutions and private sector adopting entrepreneurship, and job creation: The Nigerian University Commission (NUC) and the other relevant regulating bodies of research centres and institutes have increased the pressure on research institutes to mainstream entrepreneurship and skills for job creation as an important content of the curriculum. Centres and departments are required to have clear pathways for adopting the required entrepreneurship skills as a yardstick for being accredited for programmes. Thus, laboratories are modified to have new equipment for entrepreneurship training and employability skills.

-Direct interventions of stakeholders in the local manufacturing of material by the youth: For example, NASENI's intervention in the Energy sector of the nation's economic life has also been in the pioneering of projects on the manufacture of Solar Plant modules in Karshi – Abuja, local manufacture of Small Hydro Power (SHP) turbines and installation of same in each of the six geopolitical zones of the country, the design and production of Pole Mounted Transformers, and the design and production of wind turbine blades, etc. All of these will boost the power situation in the country, especially in rural areas. The goal of boosting power supply in rural areas is to support agro-based SMEs in creating jobs and enhancing self-dependency.

-Special funding for TVET centres in Research Institutions: The Tertiary Education Trust Fund (TETFund) supports the setting-up of specialised centres of excellence for the training of willing students during off-semester, to acquire specialized skills like automobile maintenance, welding, carpentry, tailoring, graphic design, etc. These centres are driving the development of skills in job creation entrepreneurship, with support from the Federal Ministry of Science and Technology. Private entrepreneurship and skill acquisition centres have attracted donor funding from international partners to train youths in tech skills. The harsh economic conditions in Nigeria are driving tech hubs like Robotics Africa, Educare, co-creation Hub, and other hubs to push for business in training youths in entrepreneurship skills for job creation.

-The shift in focus from knowledge generation to wealth creation: There is a general shift from knowledge creation to wealth generation which is driving the 2023 general election in Nigeria. The general spirit in the land is to move Nigeria from a consumption nation to a productive economy. Hence, there is a clear indication that all key stakeholders are now conscious of promoting entrepreneurship, youth employability skills, and the creation of more jobs. All key stakeholders prioritise skills for youth and women to promote economic growth, self-reliance, and reduction of insecurity.

3.3.4.3 Challenges and Opportunities for effective contribution of Stakeholders to youth employment in Nigeria

-Weak interactions and interlinkages between the Stakeholders: The issue of weak linkage between the research institutes and the private sector in Ghana has been a major problem militating against the successful transformation of research output and technology in academia into products and services. It has affected the development of entrepreneurship skills in youths that increase their employability potential. The disconnect between the private sector and the research is so strong that most graduates are not fit for the industry as they do not possess the relevant skills for employment. Consequently, novel approaches are required to circumvent this problem. Already, the research organisation has begun establishing technology transfer centres and incubation hubs. There is value in doing so, however, strategies are needed at the national or sectoral level to harmonise these efforts. There are weak linkages between the private sector and the government as well. This is seen in the fact that most partnerships that the private sector stakeholders have are with international and regional donor organizations. The government's relationship with the private stakeholders is mostly due to political affiliations and interests, which do not support robust interventions for entrepreneurship and job creation. The government's neglect of the research sector is seen in the prolonged strike by the research institutions (public universities). This challenge could drive the development of new policies and frameworks that encourage stakeholder collaboration and provide incentives for investment in STI, which could ultimately benefit youth employment.

-Weak funding of research and development: One noticeable weakness among private stakeholders was securing financial support for start-ups. As found to have happened very often, technology hubs have incubated entrepreneurs and start-ups to the point where they need to scale, but due to lack of financial support, many of these start-ups either failed or did not grow at their original pace. Even if funds are provided, the amount granted to accelerate entrepreneurship is usually not sufficient for capital consolidation. In addition, incubation centres' graduation rates have led to the mass production of entrepreneurs with limited support systems that guarantee the survival and growth of SMEs. Entrepreneurial mass production is not just about numbers, but other related issues as well. Funding is required to effectively develop the research infrastructure. Where modern tools equipment and internet facilities are

not available, there is need to generally increase budgetary allocation to the research and private sector to catalyse the needed changes. Weak funding of research and development has created opportunities for the private sector and international organizations to step in and fill the gap. The private sector has begun investing in research and development, particularly in the technology industry, creating job opportunities for skilled young Nigerians. Additionally, international organizations have started partnering with Nigerian universities and research institutions, providing funding for research projects and scholarships for students. This has created opportunities for young Nigerians to participate in cutting-edge research and innovation, potentially leading to new job creation in the future.

-Leadership, structural bottlenecks and corruption: In almost all MDAs, there is prominent politicisation of leadership positions, bureaucracy and corruption, which do not support competent leadership and transparent practices. An example is the university system, which is an institution that supports the implementation of technological innovation for entrepreneurship and youth employability. The university system also has constraints because the business incubator is a unit within the Centre for Entrepreneurial and Small Enterprise Development (CESED) which is embedded in a larger university framework. The work is done within a hierarchy which limits to some extent what can be done. There are no human resources challenges because the incubator taps into all the expertise in the school of business and others within the university. Funds allocated are diverted by the leadership for other purposes other than what the funds are designated for. The same scenario plays out in the government as budgetary allocations are diverted for political gains while overlooking pressing needs. One opportunity created by this challenge is the increased demand for transparency and accountability in the public and private sectors, leading to the growth of anti-corruption and governance organizations. This has created jobs for young people with skills in research, advocacy, and public policy. Another opportunity is the need for innovative solutions to address the challenges facing the STI ecosystem, leading to the growth of technology-based startups and entrepreneurship. This has created employment opportunities for young people with skills in technology, entrepreneurship, and innovation.

3.3.5 Rwanda

Rwanda's public system is supporting the transformative potential of STI with the State playing the biggest role in financing and setting up knowledge-producing institutions including innovation hubs and universities. Rwanda's knowledge production has centred on the collation of all public universities and their constituent colleges into one single university 'The University of Rwanda (UR), a key country's 'knowledge hub'. Emerging, and complementing other public systems are the TVET institutions aimed at equipping the youth with capabilities to help Rwanda achieve its vision through its manifesto "Made in Rwanda policy". Innovation hubs and fabrication labs are supporting knowledge production as well as ICT innovations to address widespread societal issues in the country. While the systems and institutional setup for knowledge production are clearer in Rwanda, challenges remain in building a critical mass of researchers and supporting potential knowledge producers in the non-state sectors to contribute to Rwanda's knowledge portal and support for knowledge co-production. In particular, public funding through the establishment of the Science Granting Council has seen the council set budgets for funding facilities such as industrial incubation centres, product laboratories, research supporting both formal and informal sectors and so on-implicating more targeted funding for specific industrial outputs and outcomes. The governance framework has also created systems for enhancing appropriate funding for R&D activities, through the establishment of the National Research and Innovation Fund (NRIF) coordinated by the National Commission for Science and Technology (NCST). Apart from the Government's annual allocation of 0.5% of the total budget to the NRIF, there is recognition that more funding for STI activities is to be sourced through collaborative efforts in both bilateral and multilateral research projects.

The National Council for Science and Technology is the principal body mandated to coordinate and monitor national science, technology, research and innovation activities, although the coordination of innovation policy will have to be shifted to the newly formed Ministry of ICT and Innovation. The NCST is governed by the Council, co-chaired by the Minister of Education, which is mandated to set up a firm research and innovation system that ensures the alignment of STI with the national development goals (Ministry of Education [MINEDUC], 2018). Nonetheless, the NCST remains a semi-autonomous agency reporting directly to the Office of the President of the Republic. Some of the key stakeholders in STI are provided in Annex 1(e).

3.3.5.1 Key STI stakeholders' powers and influence in Rwanda

Government stakeholders in Rwanda play a very critical role in STI implementation, especially in creating the enabling environment for the creation of opportunities for the youth. They were generally rated highly in terms of power and influence except for NIRDA, NAEB and RwEdNet (Figure 19).

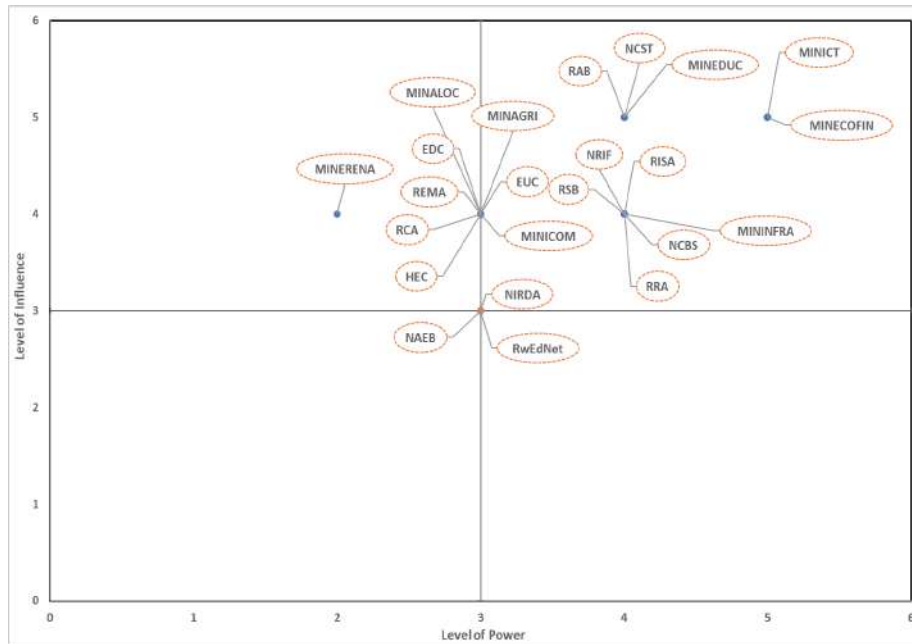


Figure 19: The level of Power and Influence among Government stakeholders in Rwanda

Ministry of Education	MINEDUC	Rwanda Education and Research Networks	RwEdNet
Ministry of ICT & Innovation	MINICT	Rwanda Revenue Authority	RRA
Ministry of Agriculture	MINAGRI	Rwanda Agriculture and Animal Resources	RAB
		Development Board	
Ministry of Local government	MINALOC	National Agricultural Export Development Board	NAEB
Ministry of Commerce	MINICOM	Rwanda Standards Board	RSB
Ministry of Finance and Economic Planning	MINECOFIN	National Capacity Building Secretariat	NCBS
Ministry of Infrastructure	MININFRA	Rwanda Cooperative Agency	RCA
Ministry of Natural Resources	MINERENA	Rwanda Environment Management	REMA
Higher Education Council	HEC	Rwanda Information Society Agency	RISA
National Commission for Science and Technology	NCST	Energy Development Corporation	EDC
National Research and Innovation Fund	NRIF	Energy Utility Corporation	EUC
National Industrial Research and Development Agency	NIRDA		

With respect to NGOs/CSOs, respondents rated the international development partners such as the World Bank Group, AfDB, and UNDP to be very powerful and influential. AGRA was also rated highly. The rest were moderately or less than moderately rated in terms of their power or influence (Figure 20).

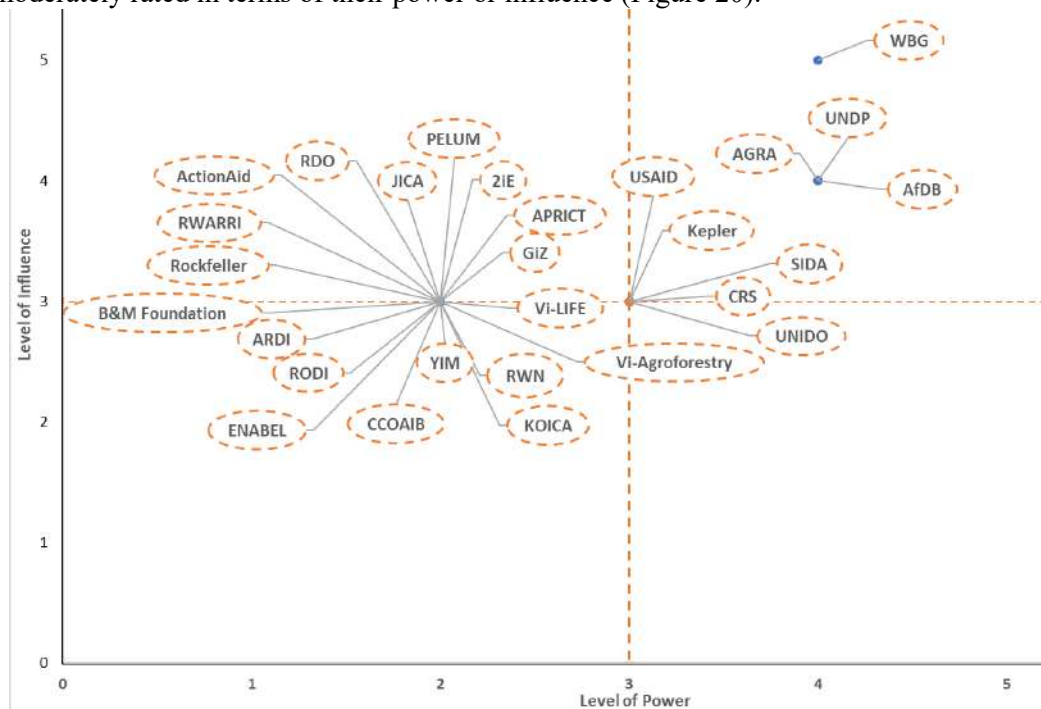


Figure 20: The level of Power and Influence among NGOs and CSOs in Rwanda

German Agency for International Cooperation	GiZ	Bill & Mellinda Gates Foundation	B&M Foundation
Korea International Cooperation Agency	KOICA	The International Institute for Water and Environmental Engineering	2iE
Japan International Cooperation Agency	JICA	Alliance for a Green Revolution in Africa	AGRA
Participatory Ecological Land Use Management (PELUM) Rwanda	PELUM	Kepler	Kepler
Rwanda Organic Agriculture Movement	ROAM	USAID- Feed the Future-Innovation Lab for Horticulture	USAID
Catholic Relief Service	CRS	Rwanda Rural Rehabilitation Initiative	RWARRI
Youth Impact Mission	YIM	Rwanda Organization for Development Initiatives	RODI
The Rwanda Women's Network	RWN	Rwanda Development Organisation	RDO
The Association of ICT Professionals in Rwanda	APRICT	Rwandan Association for Promotion of Integrated Development	ARDI
African Development Bank	AfDB	Consultative Council of Organisations Supporting Basic Initiatives	CCOAIB
World Bank Group	WBG	Vi-LIFE Programme Rwanda	Vi-LIFE
United Nations Development Program	UNDP	Belgian Development Agency	ENABEL
Swedish International Development Cooperation Agency	SIDA	United Nations Industrial Development Organization	UNIDO

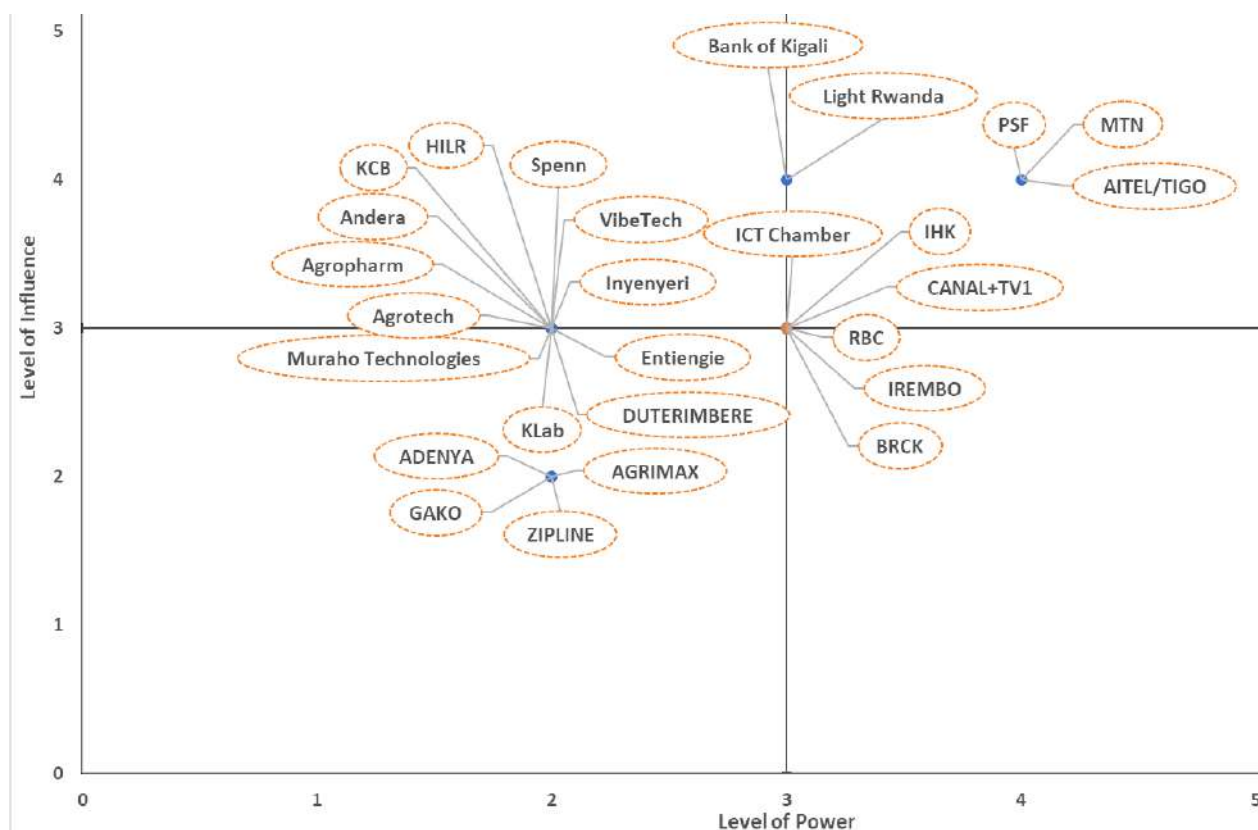


Figure 21: The level of Power and Influence among Private Sector Actors in Rwanda

Association for the Development of Nyabimata	ADENYA	Rwanda Biomedical Centre	RBC
GAKO Organic Farming Training Centre	GAKO	BRCK Rwanda	BRCK
AGRIMAX ACCESS Ltd	AGRIMAX	Institute of Research and Empowerment for Business Operations	IREMBO
Private Sector Federation	PSF	Kenya Commercial Bank/Popular Bank	KCB
KLab Rwanda	KLab	Impact Hub Kigali	IHK
Horticulture Innovation Lab in Rwanda	HILR		

The **private sector** actors were generally rated lowly in terms of power and influence with the exception of PSF, Airtel/TIGO and MTN which were rated as more than moderately powerful and influential (Figure 21).

Among the **research institutions**, the respondents rated CAVM and KIST are among the highly powerful and influential institutions. NZIZA was the least powerful while the others were moderately powerful or influential (Figure 22).

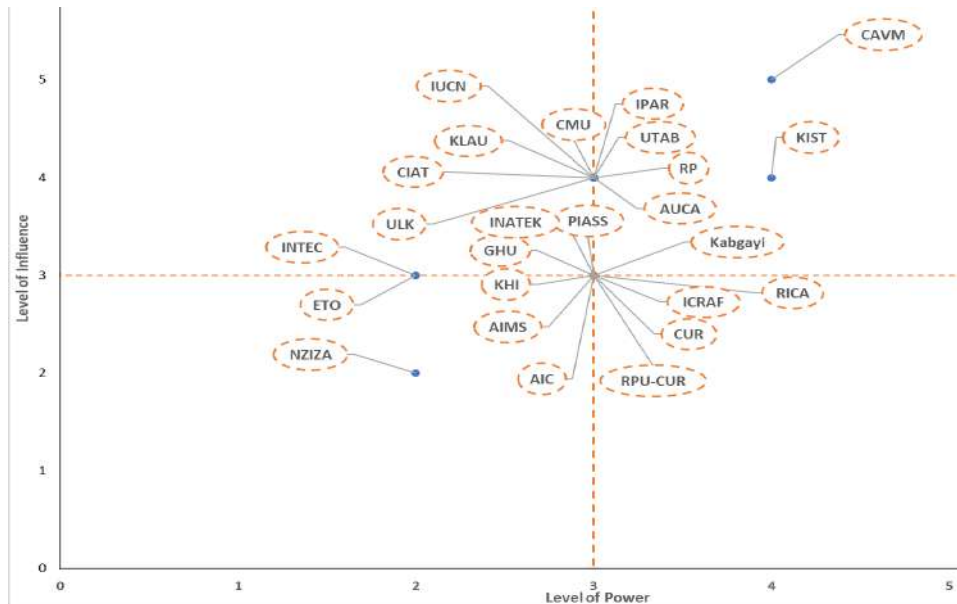


Figure 22: The level of Power and Influence among Research Institutions in Rwanda

The University of Technology and Arts of Byumba	UTAB	Kabgayi Catholic University	Kabgayi
African Institute of Mathematical Sciences	AIMS	Institute of Agriculture, Technology and Education of Kibungo	INATEK
College of Agriculture and Veterinary Medicine UR	CAVM	Kigali Independent University	ULK
Kigali Institute of Science and Technology	KIST	Kigali Lay Adventist University	KLAU
Agribusiness Innovation Center	AIC	Rwanda Pentecostal University/Christian University of Rwanda	RPU-CUR
Rwanda Polytechnic	RP	ETO (École Technique Officielle) Kicukiro	ETO
Kigali Health Institute	KHI	The Institute of Technology of Kigali	INTEC
Institute for Policy Analysis and Research	IPAR	NZIZA Training Academy	NZIZA
Carnegie Mellon University	CMU	Rwanda Institute for Conservation Agriculture	RICA
Global Health University	GHU	World Agroforestry Center	ICRAF
Adventist University of Central Africa	AUCA	International Center for Tropical Agriculture	CIAT
Protestant Institute of Arts and Social Sciences	PIASS	International Union for Conservation of Nature	IUCN
Catholic University of Rwanda	CUR		

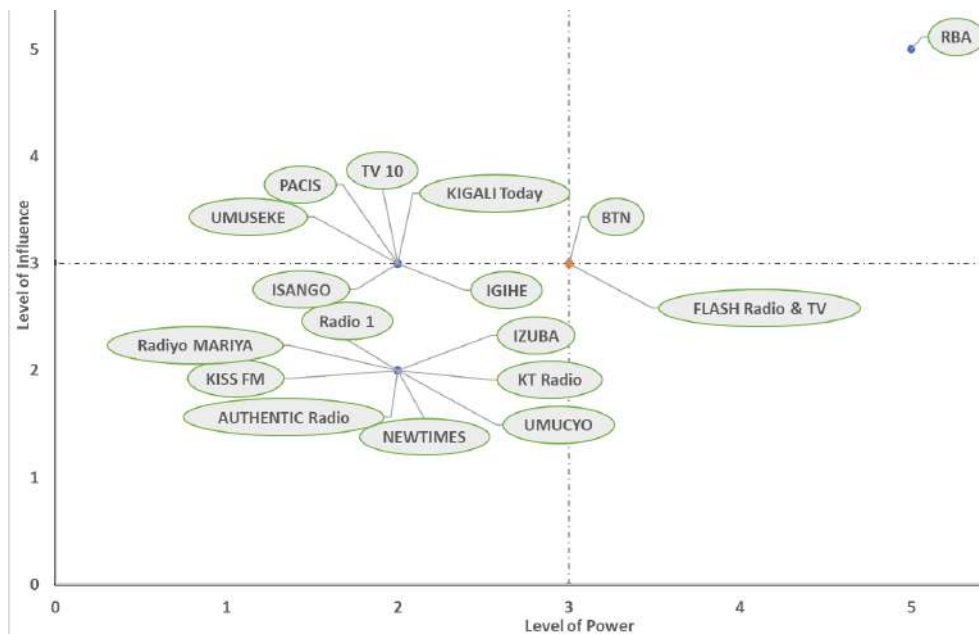


Figure 23: The level of Power and Influence among the Media in Rwanda

Rwanda Broadcasting Agency	RBA
ISANGO Star Radio & TV	ISANGO
IGIHE.Com	IGIHE

The **media** can play a significant role in promoting STI in Rwanda. It can provide information and coverage of scientific and technological developments, as well as profiles of innovators and entrepreneurs. This can help to inspire and encourage others to pursue careers in these fields and can also help to create a culture that values and supports innovation and entrepreneurship. In Rwanda, respondents rated Rwanda Broadcasting Agency (RBA), a government-

owned media company as the most powerful and influential while the rest were lowly rated. Most of the companies were in the low-power-low-influence quadrant of the power-influence grid (Figure 23).

3.3.5.2 Best practices for stakeholders in Rwanda

-The increasing political will to support STI: The overall operational environment seems to be more developed as there is a high political will expressed in policy documents and leadership commitments. The high interest from the society also expresses a promising social and cultural acceptance of innovations. This is contributing to increased opportunities for the youth progressively as a result of the conducive environment for the application of STI.

-Participation in the Science Granting Council initiative: Joining the Science Granting Council initiative has provided numerous benefits to Rwanda, including increased funding for research and innovation, improved coordination and collaboration among stakeholders, development of human capital, and improved access to international research networks. These benefits have contributed to the country's overall development by providing solutions to the country's challenges, creating opportunities for innovation and growth, and building a pool of highly skilled researchers and innovators. The initiative provides training and mentorship opportunities to researchers, policymakers, and other stakeholders in the research ecosystem. This has enabled Rwanda to develop its human capital by providing opportunities for researchers to acquire new skills and knowledge. This has led to the development of a pool of highly skilled researchers and innovators who can contribute to the country's development.

-Establishment of Centres of Excellence (CoE): CoEs have contributed to the development of critically needed skills and contribute to national and regional socio-economic development. Another initiative that is advancing science and technology in Rwanda is the Kigali Innovation City, which is aimed at linking knowledge generated by academia with private sectors, including CoE in ICT to attract private sector companies to establish the Kigali Innovation City. Other initiatives include the Rwanda Education and Research Networks (RwEdNet) that link education and research; Fabrication Laboratory (FabLab); the International Network for Government Science Advice (INGSA) and the Network for the Coordination and Advancement of Sub-Saharan Africa-EU Science Technology Cooperation, whose main aim is to enhance collaboration and provide a platform for policy exchange and advice on priority areas for research funding, capacity building and research across diverse global science advisory organizations and national systems.

-The establishment of the National Industrial Research and Development Agency (NIRDA): NIRDA is a government agency aimed at providing agencies to improve competitiveness and has proved to be one of the models of a national style of innovation. NIRDA works to leverage the capacity of industry and academia by employing a model where academia works directly with industry for example by using applied research to promote the commercialization of products. NIRDA is in charge of looking at technological solutions that are appropriate and mainly focuses on technological adaptation and acquisition. It also provides information to industry using technology by using a value-chain approach and advice on the technology that is only relevant to Rwanda. For this, NIRDA looks at case studies to map out what is referred to as “Feel Fair” looking at what has worked and what did not work. Its approach is a holistic one that focuses on academia, the private sector as well as the hybrid model between academia and the private sector.

-Establishment of a competency-based curriculum: There have been positive changes more broadly within the education and skills-building arena in Rwanda: notably, a change to a competency-based curriculum across primary and secondary schools, and an increased focus on TVET and the role of innovation outside of formal research environments within universities. There is also an AfDB initiative that was attempting to link industry and higher education establishments.

3.3.5.3 Challenges and Opportunities for effective contribution of Stakeholders to youth employment in Rwanda

-Lack of data: The respondents emphasized that data gaps in the knowledge systems and innovation ecosystem in Rwanda are a major challenge that needs to be addressed urgently if STI is to increase technological innovation, entrepreneurship, job creation and enhance the socio-economic development of the people of Rwanda, especially the youth, women and marginalized groups.

-Data management is a concern for policy coordination, therefore, the responsible institutions charged with the management of the data need to up their game. Investments in national databases that support cross-sectoral policy coordination and the understanding of all sectors of the economy are needed. Data on investments in engineering

sciences, research and the performance of innovation hubs supported by the private sector were highlighted as top STI data needs.

-Rwanda's knowledge system is heavily pegged on academia with little focus on R&D for firms and by the firms: The understanding of the knowledge systems in Rwanda is that R&D is mostly for research and the mindset needs to shift for R&D to be for the private sector and development as industrial innovation occurs within firms and not in research. The level of knowledge and innovation happening in firms is often underestimated. There is therefore the need to create institutional linkages and incentivize agencies involved in innovation which has a cost implication. Further, incentives should be given to researchers to have an end product that goes beyond publication. The industry needs to also understand that R&D and innovation are not only the business for academia but their business as well, especially in new product development. There is need to see the link between R&D investments and Rwanda's GDP to increase funding for research by the government. Overreliance on foreign support for R&D has also been a major issue as foreign funding contributes to about 69% of R&D funding. The government of Rwanda (GoR) through the Workforce Development Agency (WDA) and National Employment Programme (NEP) has been targeting skills development, especially through TVET provision. Some success is evident; however, training programmes have faced significant challenges in finding suitable apprenticeship programmes for their students (GoR, 2017). So far, the private sector has not responded with much enthusiasm, which has limited the ability of programmes to deliver their courses, which rely heavily on on-the-job training in line with international best practices. Furthermore, several of the priority value chains rely heavily on soft skills and language skills, especially tourism and hospitality sectors. Developing these skills will be a key requirement going forward.

-Having NCST housed within a ministry of education: means that there is a sharp focus on universities and their role in STI production according to most of the respondents, suggesting an insufficient emphasis on industrial partners and the private sector or community groups. Lack of coordination between stakeholders and insufficient linkages with the private sector is a major stumbling block. However, it was noted that the creation of NIRDA had the potential and mandate to change this. The Rwandan research environment shows a low level of interaction among researchers and research end-users. This makes research that is being conducted unresponsive to demands of the society. Although critical institutions like the NCST and the NIRDA have been established, the collaboration among institutions is still low and this slows the Rwandan NIS construction process. The lack of interactions may also be linked to poor coordination and facilitation from public institutions that are mandated to do that. This may be resulting from the weak institutional framework and lack of clear policy frameworks.

-The process of innovation dissemination remains unclear to many stakeholders: Dissemination in this context entails bringing the innovation to end-users, either in the form of a commercial undertaking or as a social innovation transferred directly to the users, e.g., improved agricultural farming techniques. Only a few representatives of institutions stated that substantial steps in dissemination have been taken. Major reasons for this low dissemination ability identified by the respondents include the lack of a clear dissemination framework, lack of coordination at the national level and within institutions, lack of flexible systems that allow dynamism among stakeholders, lack of skills for better profiling innovations to be disseminated and lack of financial means as well as lack of a supportive and receptive mind-set for innovation for end-users. In addition to these major reasons, poor information sharing and lack of knowledge of commercialization strategies, as well as low skills in intellectual property management are recognized by the interviewees as limiting factors for innovation dissemination.

3.3.6 Senegal

Senegal is making bold steps in establishing STI in the country as the major enabler of national development. Although it does not have an explicit policy for the sector, there has been an increased awareness of STI over the past few years (Daniels et al, 2020). The Senegalese government's stated aim to "fully invest in research development" (Ministry for Higher Education, Research and Innovation [MESRI], 2018) and Axe 2 of the PSE on human capital, places high expectations for STI to contribute to the country's structural transformation and objective of becoming an emerging economy. In addition to the higher education reforms, MESRI seeks to align its strategy with the PSE, particularly Axe 2 on Human Capital, Social Protection and Sustainable Development. MESRI has seen the first year of implementation of its Sectoral Development Policy Letter (LPSD), aligning its objectives with the Plan for Senegal Emergence for the 2018-2022 period (MESRI, 2018). The ongoing implementation of higher education reforms has led to procedural, organisational, and structural changes within the STI system. The adoption of a new framework law under the 11 Presidential Decisions has expanded the Ministry's remit to include innovation and responsibilities for two new missions: universities' contributions to community services and graduates' access to employment (MESRI, 2018). The Ministry now renamed the Ministry for Higher Education, Research and

Innovation (MESRI), is responsible for implementing the reforms and has oversight of STI activities in Senegal. More specifically, its responsibilities include higher education, research and innovation, and student social and welfare issues. MESRI has also adopted several texts for the implementation of the reforms.

Internal changes within MESRI have led to the creation of the General Directorate for Research and Innovation (DGRI) to implement policies for research and innovation. Its role also includes ensuring the coordination and harmonisation of related activities and resource pooling. It is also responsible for strengthening the different components of the national research system to enable synergies, promoting the diffusion of research results and their valorisation, implementing a funding system for research activities and diversification of funding sources, and developing a scientific and technical culture (Pointel et al, 2020). To achieve this, the DGRI's responsibilities are split between four distinct directorates with respective responsibilities for research strategies planning; innovation, intellectual property and technology transfer; scientific research and technological development financing; and the promotion of scientific culture (Pointel et al, 2020). While MESRI has overall responsibility for leading STI developments, research activities are fragmented between institutions under the supervision of different ministries. For example, the Institute for Food Technology (ITA) comes under the responsibility of the Ministry of Industry, while the Senegalese Institute for Agricultural Research (ISRA) is attached to the Ministry of Agriculture.

3.3.6.1 Key STI stakeholders' powers and influence in Senegal

Government stakeholders in Senegal have high power and influence in STI-related issues according to the respondents. They rated the Ministry for Higher Education, Research, and Innovation (MESRI) and the Center for Experimental Research and Study of Equipment (CEREEQ) to have the highest level of power and influence. On the other hand, the Sovereign Fund for Strategic Investments (FONSIS), the National Agency for Statistics and Demography (ANSD), the Senegalese Export Promotion Agency (ASEPEX), the National Bank for Economic Development (BNDE) and the Agency for the promotion of investments and major works (APIX) were rated lowest for both power and influence. Institute for Food Technology (ITA) was rated highly influential but less powerful. See the details in Figure 24.

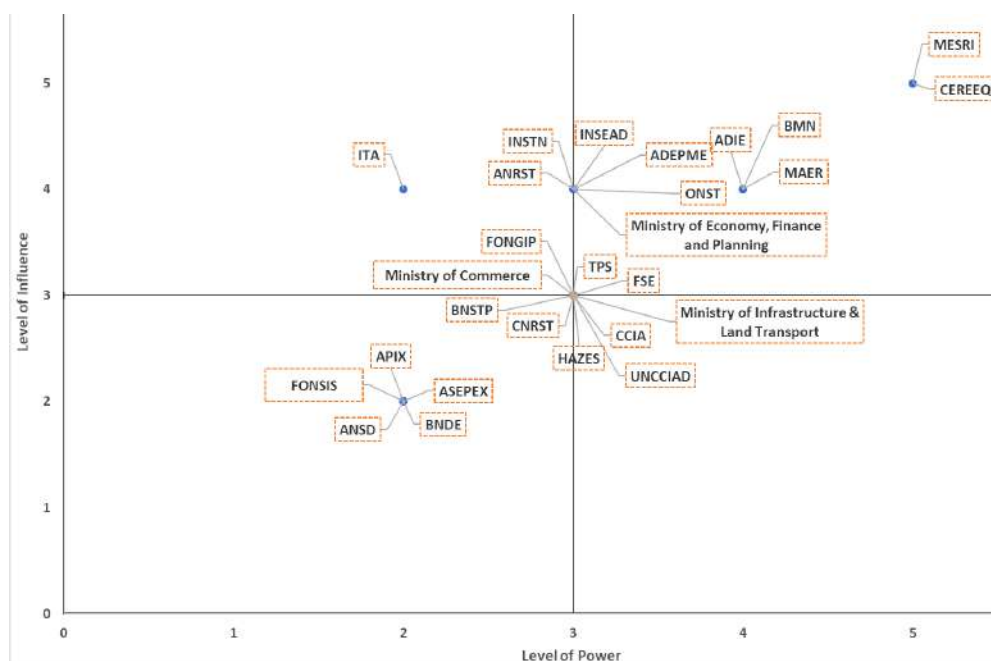


Figure 24: The level of Power and Influence among Government stakeholders in Senegal

Ministry for Higher Education, Research, and Innovation	MESRI	State Computer Development Agency	ADIE
Ministry of Agriculture and Rural Equipment	MAER	High Authority of the Special Economic Zone	HAZES
Institute for Food Technology	ITA	The Priority Investments Guarantee Fund	FONGIP
The Center for Experimental Research and Study of Equipment	CEREEQ	Sovereign Fund for Strategic Investments	FONSIS
National Institute for Research in Nuclear Science and Technology	INSTN	Special Fund for Support to the Energy Sector	FSE
The Upgrading Office (Bureau de Mise à Niveau)	BMN	National Agency for Statistics and Demography	ANSD
Chamber of Commerce, Industry and Crafts	CCIA	Bourse Nationale de Soustraction et de partenariat	BNSTP
Senegalese Export Promotion Agency	ASEPEX	National Bank for Economic Development	BNDE
Agency for Development and Supervision of Small and Medium Enterprises	ADEPME	National Union of Chamber of Trades, Industry and d'Agriculture in Sénégal	UNCCIAD
Point Senegal Foundation	TPS	National Council for Research and Technological Development	CNRST

The Agency for the promotion of investments and major works	APIX	National Agency for the Promotion of Scientific and Technical Research	ANRST
National Observatory for Science and Technology	ONST	National Institute for Higher Education in Technology and Management	INSEAD

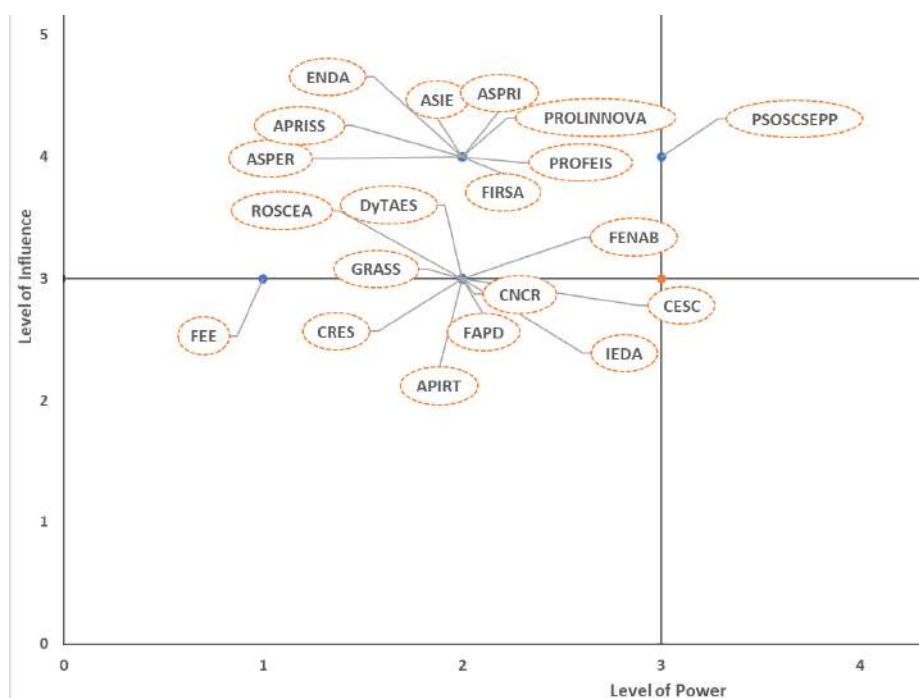


Figure 25: The level of Power and Influence among NGOs and CSOs in Senegal

National Federation for Organic Agriculture	FENAB	Plateforme Sénégalaise des Organisations de la Société Civile pour le Suivi et l'Evaluation des Politiques Publiques	PSOSCSEPP
Dynamics for Agroecological Transition in Senegal	DyTAES	Réseau des Organisations de la Société Civile pour l'Eau et l'Assainissement	ROSCEA
National Council for Consultation and Cooperation of Rural People	CNCR	Fondation pour l'Enfance et l'Education	FEE
Federation of Agropasteurs de Diender	FAPD	Fondation pour l'Innovation et la Recherche en Sciences Appliquées	FIRSA
Innovation, Environment and Development in Africa Promoting Local Innovation	IEDA PROLINNOVA	Groupe de Recherche et d'Appui en Sciences Sociales Association Sénégalaise pour la Promotion de l'Energie Renouvelable	GRASS ASPER
Promoting Peasant Experimentation and Innovation in the Sahel	PROFEIS	Association pour la Promotion de la Recherche et de l'Innovation en Sciences de la Santé	APRISS
Association Sénégalaise pour l'Innovation et l'Entrepreneuriat	ASIE	Clean Energy Solutions Center	CESC
Association pour la Promotion de l'Innovation et la Recherche Technologique	APIRT	Environmental Development Action in the Third World	ENDA
Association Sénégalaise pour la Promotion de la Recherche et de l'Innovation	ASPRI	Consortium pour la Recherche Economique et Sociale	CRES

For **NGOs** and **CSOs**, most of the mapped institutions were perceived to be more influential than powerful. The most powerful and influential among them is Plateforme Sénégalaise des Organisations de la Société Civile pour le Suivi et l' Evaluation des Politiques Publiques (PSOSCSEPP) according to the respondents. The rest were rated 2 and below on the power scale (Figure 25).

Figure 26 shows the power and influence rating for stakeholders drawn from the **private sector**. Respondents in Senegal rated ENERGECO Ltd to be the most powerful and influential private company. The others were rated moderately to low in the level of influence and power. Huawei Senegal was rated the least powerful and least influential company.

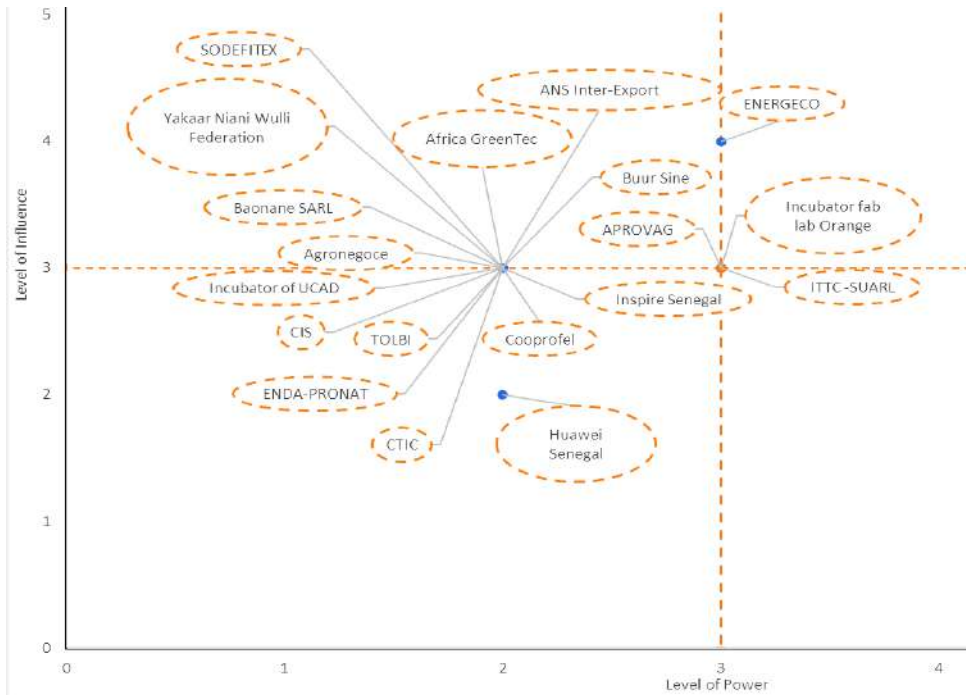


Figure 26: The level of Power and Influence among Private Sector Actors in Senegal

Touba International Trade Company - SUARL)	ITTC -SUARL	Environment Development Action for the Natural Protection of Terroirs	ENDA-PRONAT
The Gambia River Valley Producers Association	APROVAG	Club of Investors of Senegal	CIS
ENERGECO Ltd	ENERGECO	CTIC Dakar start-ups Incubator	CTIC

Senegalese Institute of Agricultural Research (ISRA) was perceived to be the most powerful and influential **research institution** in Senegal, according to the respondents while the Higher Institute of Professional Education (HIPE) was perceived to be the least powerful and influential. Another highly rated research institution is the Higher Polytechnic School of Dakar (ESP). The rest are perceived to be moderately influential with less power (Figure 27).

The **media** in Senegal play a very critical role in STI development. They can be credited for the high level of awareness on STI. The media stakeholders in Senegal are all rated moderately and above in terms of influence (Figure 28). The most powerful and influential institution is Le Soleil. Innovations Senegal, Techno Senegal and STI Africa have the lowest power but are highly influential.

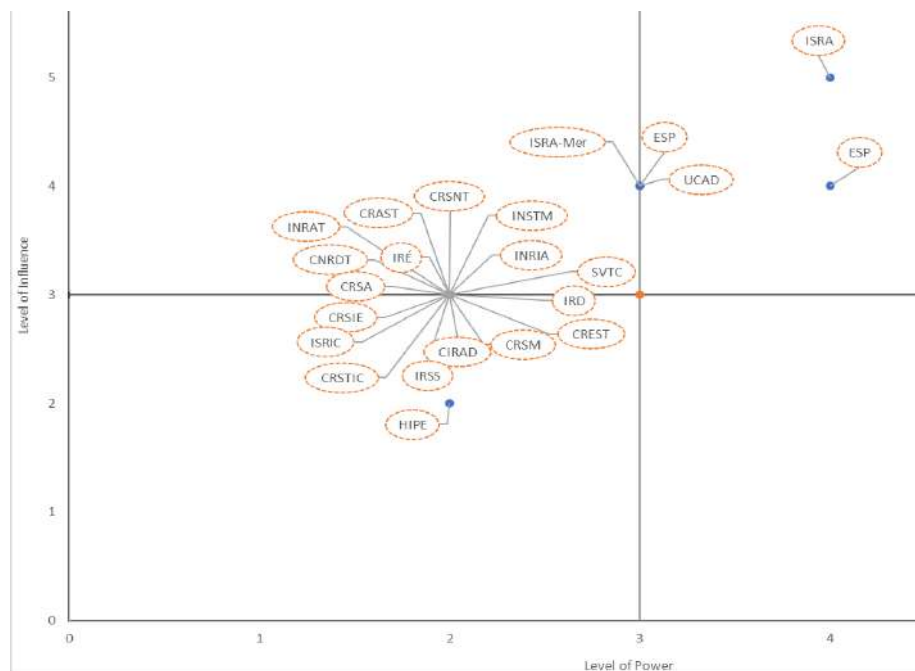


Figure 27: The level of Power and Influence among Research Institutions in Senegal

Sahel-Vert Training Centre	SVTC	Centre de Recherche en Sciences et Technologies de l'Information et de la Communication	CRSTIC
Senegalese Institute of Agricultural Research	ISRA	Centre de Recherche en Sciences de la Mer	CRSM
Université Cheikh Anta Diop Dakar	UCAD	Centre de Recherche en Sciences Agronomiques	CRSA
French Agricultural Research Centre for International Development	CIRAD	Centre de Recherche en Sciences de l'Ingénierie et de l'Environnement	CRSIE
Ecole Supérieure Polytechnique	ES	Institut de Recherche en Sciences de la Santé	IRSS
Higher Institute of Professional Education	HIPE	Centre de Recherche en Sciences Exactes et Technologie	CREST
Higher Polytechnic School of Dakar	ESP	Institut des Sciences de la Mer et de l'Aquaculture	ISRA-Mer
Centre de Recherche en Sciences Naturelles et Technologies	CRSNT	Institut Sénégalais de Recherches en Sciences de l'Information et de la Communication	ISRIC
National Institute for Research in Applied Sciences and Technology	INRAT	Centre de Recherche et d'Appui en Sciences et Technologies	CRAST
National Institute for Research in Science and Technology of Materials	INSTM	Institut de Recherche en Énergie	IRÉ
National Institute for Research in Computer Science and Control	INRIA	Institut de Recherche pour le Développement	IRD
National Center for Research and Technological Development	CNRDT		

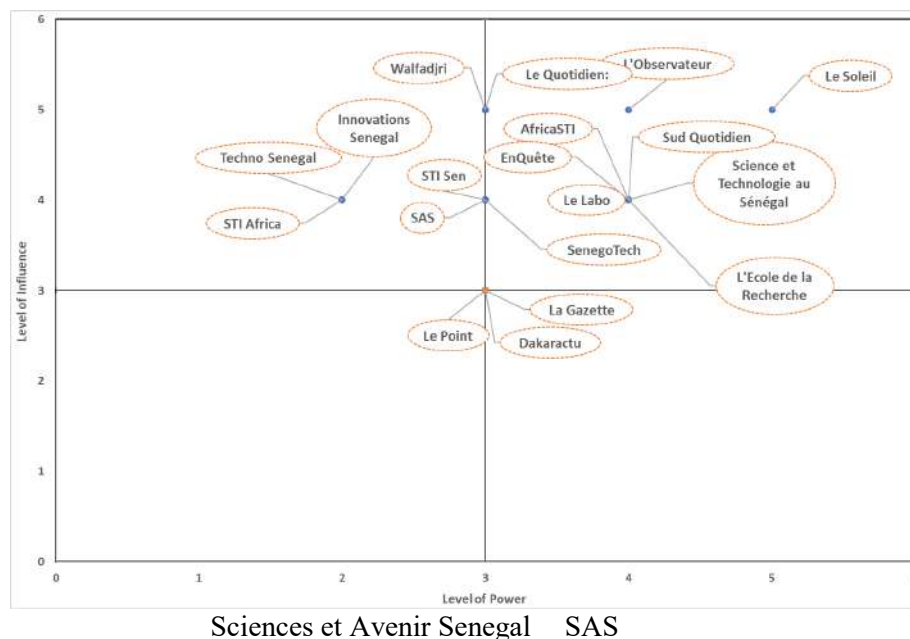


Figure 28: The level of Power and Influence among Research Institutions in Senegal

3.3.6.2 Best practices for stakeholders in Senegal

-The establishment of the General Directorate for Research and Innovation (DGRI): MESRI has tried to respond and provide more stability with the creation of the General Directorate to improve governance and provide texts. The Directorate General for Research and Innovation is responsible for ensuring the coordination and harmonization of research and innovation activities as well as the pooling of resources. DGRI assists the Minister in the implementation of the research and innovation policy as well as the pooling of resources. It assists the Minister in the implementation of the research and innovation policy. As part of its missions, the General Directorate for Research and Innovation: a) ensures the strengthening of links between the various components of the national research system in order to promote synergies; b) promotes the dissemination of research results and their exploitation; c) promotes research and contributes to the establishment of a funding system for research activities and the diversification of funding resources; and d) ensures the promotion of scientific and technical culture. This has greatly improved service provision and supported MESRI as the main Science Granting Council for Senegal.

-Participation in the Science Granting Council Initiative (SGCI): Over the last few years, Senegal has benefited from the SGCI's activities to help in strengthening its capacities for STI policy. These have included training sessions and capacity building in surveys and STI indicators, and interactions and engagement with its peers within regional platforms. The embeddedness of the SGC within MESRI ensures that individuals are able to participate in training activities, depending on the topics covered.

-The existence of important research, training and R&D facilities at universities, R&D centres and some technical ministries: In addition, there is a diversified and high-quality institutional framework, with regard to the number of national, regional and international R&D institutions and various STI promotion structures such as the ANRSA, ANSTS, ASN, ASPIT, CNDST, etc.

-Setting up a National Council for Coordination and Development of Intellectual Property (NCDCIP) and a National Committee on Geographical Indications (NCGI): Senegal is the first African country that adopted and submitted in 2011 a National Plan for the Development of Intellectual Property (NPDIP). This is laying up a good foundation for implementing IPR in the country. Young people can take advantage of this policy to protect their innovations and commercialise them without fear.

-The setting up of scientific and technical cooperation with many sub-regional, regional and international institutions in Senegal: In this regard, the large number of these institutions are represented in the country and frequent Dakar, as well as in other cities. The holding of several regional and international scientific events (seminars, conferences, workshops, etc.), therefore, constitutes a perfect illustration. This makes the country to receive many opportunities that the various organizations hosting events may have and as a result opportunities for capacity building and jobs are increased in the process.

3.3.6.3 Challenges and Opportunities for effective Stakeholder contribution to job creation in Senegal

-Pending comprehensive STI Policy: Unlike Anglophone countries, Senegal is still lacking a dedicated STI policy. This is still a stumbling block. Despite institutional and organisational changes within MESRI, implementing the Presidential Decisions towards research and innovation, progress towards a fully-fledged STI policy framework has been slower than expected. For example, the STI survey to provide robust indicators and a dedicated STI policy are still pending. Having an explicit STI policy in place may not address all the challenges in the sector. However, it would enable the actors to see a roadmap for STI and clarify lines of responsibility. The lack of a national framework and STI policy is particularly problematic as there is no clear roadmap towards activities and prioritisation of STI in the country. A formalisation of STI activities in policy instruments would enable Senegal to articulate the main drivers to conduct specific activities.

-Fragmentation of actors and weak coordination in the NIS: Governance of all STI and actors also remains a challenge. Although MESRI has improved some of its governance capacities in the field of research with new texts for executions in the STI field and policy documents, as outlined in its LPSD (MESRI, 2019), there is also the need to gather and coordinate the range of actors involved in STI. Actors include MESRI itself, research labs, universities, and private enterprises, the National Agency for Statistics and Demography (ANSD), research Think-tanks, NGOs and other research structures, and foreign countries. As a result, research and innovation, and associated funding streams, are dispersed and fragmented with multiplication and superposition of priorities, leading to lack of visibility and synergies between actors (Cissé et al, 2019). There have been prior attempts to improve coordination. However, these attempts have been carried out at thematic levels with specific topics rather than addressing governance across the STI field.

-Conflicting communication and false hope: There are declarations at a high level, which are in line with national policies, but without follow-up on the ground. Even if resources are agreed upon, they do not trickle down to the institutional level. Decision-makers, therefore, need to provide concrete facts/evidence with funds/financing.

-Lack of gender considerations within processes of institutional transformations and political decisions: Promoting STI in Senegal through an inclusive approach also requires taking gender considerations into account, as girls and women are under-represented in the STI field. This means raising their awareness – prior to university, from an early age and through secondary school – that there are career opportunities for women in the STI field in Senegal. This should aim to overcome socio-political barriers and provide support to remove the stumbling blocks facing young girls and parents in the STI and STEM fields. These actions could increase the space for advocacy and gender-aware solutions that help address gender-related STI issues.

-Inadequate skills and education among young people: Most young people in Senegal lack the necessary skills and education to participate in the formal economy. This is due to the limited availability of quality education and training programs, particularly in rural areas. As a result, many young people are unable to access high-paying jobs or create viable businesses, limiting their ability to contribute to the country's economic growth. The government has tried to address this issue by increasing investments in education and developing additional TVETs. In addition, it has increased access to higher education through the Senegal Virtual University, established in 2013. Its primary goal is to provide access to higher education for individuals who are unable to attend traditional universities due to financial or geographical constraints. This is still not enough. The private sector and development partners can step in to support these initiatives.

3.3.7 Uganda

Stakeholders in Uganda are playing a significant role in enhancing technological innovation development, employability, entrepreneurship, and job creation for the youth. These stakeholders are conducting research, providing training, offering mentorship, and providing access to resources to youth who are interested in these areas. These efforts are helping to create a more supportive environment for youth who are interested in pursuing these opportunities and to help them achieve their goals. More specifically, the government is responsible for developing the country's research policies in line with the National Plan for Science, Technology and Innovation, and guides coordination, priorities-setting, and policy development. CSOs and research organizations operate within this centralised institutional framework. Public research institutes are well connected to the Government and bear significant influence in the decision-making process. Although publicly funded research organisations dominate Uganda's research, the government has established strong relationships with international organisations such as the World Bank, which have a presence in Uganda and produce policy-related research. By contrast, private think tanks and research institutes appear to have a limited role in the national landscape and little influence on government policies. The key stakeholders active in enhancing technological innovations, skills development for employability, youth employment and entrepreneurship in Uganda are listed in Annex 1 (g).

3.3.7.1 Key STI Stakeholders' Powers and Influence in Uganda

The strength and sway of the key STI stakeholders have a significant effect on the ability to use STI to generate new jobs, improve existing ones, and foster entrepreneurial endeavours. Five groups of STI stakeholders in Uganda's STI ecosystem are discussed according to our informants' responses.

The analysis of the level of power and influence among **government institutions** shows that the Ministry of Science, Technology and Innovation (MoSTI), and Uganda National Council for Science and Technology (UNCST) have the highest power and influence among the government STI stakeholders or institutions (See Figure 29). This could be attributed to the intentionality and purpose that the two institutions are implementing their duties to enhance employability, entrepreneurship, and job creation in the country. On the other hand, the Directorate of Industrial Training (DIT) and the National Information Technology Authority (NITA) had the lowest power and influence among the category of government actors in the STI ecosystem.

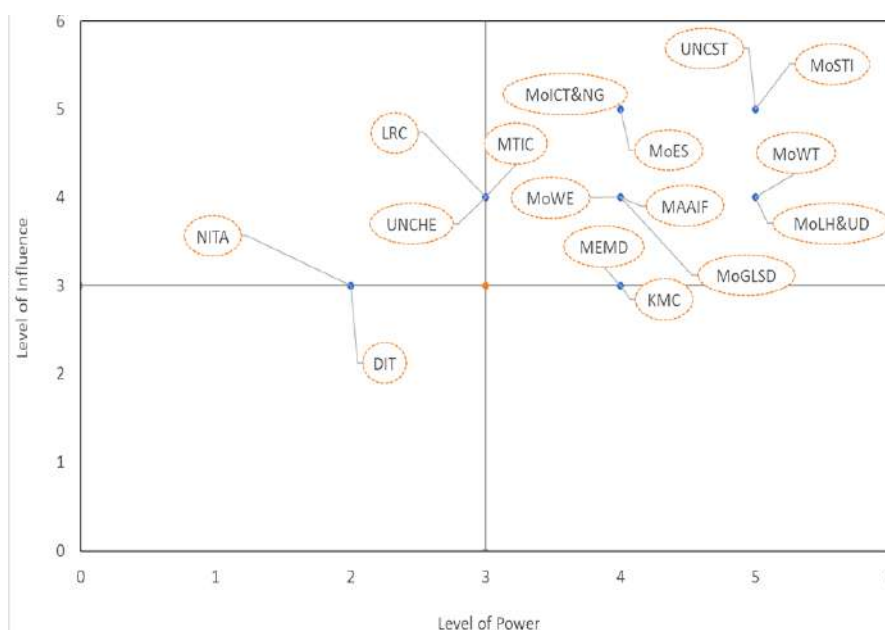


Figure 29: The level of Power and Influence among Government stakeholders in Uganda

Ministry of Science, Technology & Innovation	MoSTI	Ministry of Trade Industry and Cooperatives	MTIC
Uganda National Council for Science and Technology	UNCST	Ministry of Energy and Mineral Development	MEMD
Kiira Motors Corporation	KMC	Ministry of Works and Transport	MoWT
Ministry of Agriculture, Animal, Industry and Fisheries	MAAIF	Ministry of Lands Housing and Urban Development	MLH&UD
Ministry of Gender, Labour, and Social Development	MoGLSD	Directorate of Industrial Training	DIT
Ministry of ICT and National Guidance	MoICT&NG	Uganda National Council for Higher Education	UNCST
Ministry of Water and Environment	MoWE	National Information Technology Authority	NITA
Ministry of Education and Sports	MoES	Law reform commission	LRC

Figure 31 shows the analysis of the level of power and influence among the **research institutions**. Uganda Industrial Research Institute (UIRI) has the highest power and influence among the government research institutions. On the other hand, Mbarara University of Science and Technology (MUST), ABI Zonal Agricultural Research and Development Institute (ABI), Bulindi ZARDI (BLN) and Buginyanya Zonal Agricultural Research and Development Institute (BugiZARDI) had the lowest power and influence among the category of research institutions in the STI ecosystem.

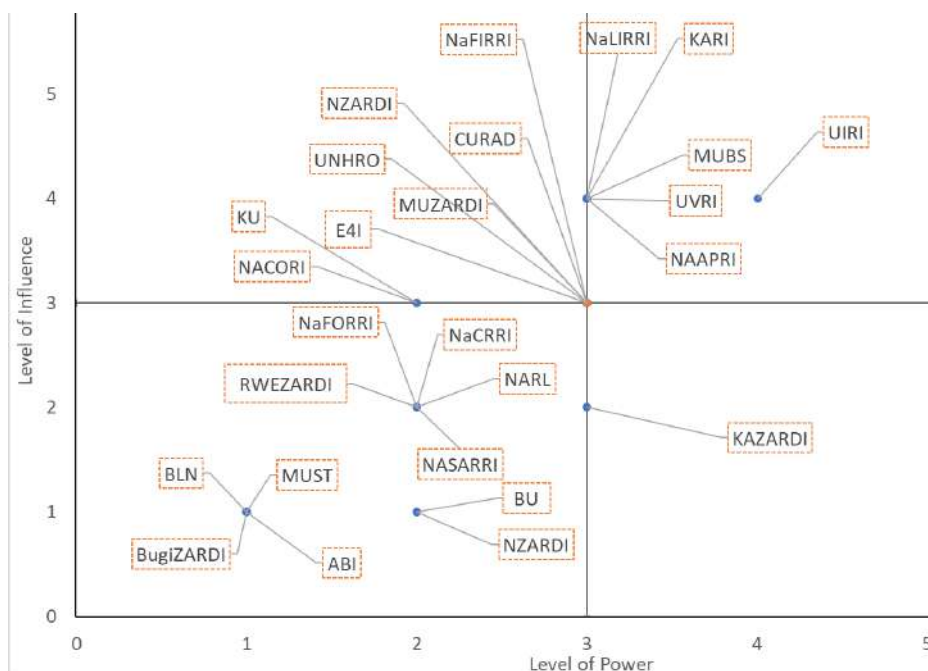


Figure 30: The level of Power and Influence among Research Institutions in Uganda

Uganda Industrial Research Institute	UIRI	E4Impact Foundation	E4I
Uganda Virus Research Institute	UVRI	Kyambogo University	KU
Uganda National Health Research Organization	UNHRO	Mbarara University of Science and Technology	MUST
Makerere University College of Business & Management Sciences	MUBS	Busitema University	BU
Namulonge Agricultural and Animal Production Research Institute	NAAPRI	National Agricultural Research Organization	NaCRRRI
Kawanda Agricultural Research Institute	KARI	National Forestry Resources Research Institute	NaFORRI
The Consortium for enhancing University Responsiveness to Agribusiness Development Limited	CURAD	Nabuin Zonal Agricultural Research and Development Institute	NZARDI
National Coffee Research Institute Uganda	NACORI	Buginyanya Zonal Agricultural Research and Development Institute	BugiZARDI
Kachwekano Zonal Research and Development institute	KAZARDI	Ngetta Zonal Agricultural Research and Development Institute	NZARDI
ABI Zonal Agricultural Research and Development Institute	ABI	The national Fisheries resources research institute	NaFIRRI
Bulindi ZARDI	BLN	Buginyanya Zonal Agricultural Research and Development Institute	BugiZARDI

In Figure 30, the analysis of the level of power and influence for the stakeholder in the **NGOs and CSOs** category shows that Facilitated Action for Community Transformation (FACT), World Vision Uganda (WVU), American Chamber of Commerce in Uganda (ACCU), Tropical Institute of Development Innovations (TRIDI) and Startup Uganda (SU) were rated highest power and influence but none of them were placed in the highest power and influence quadrant. Subsequently, Africa Innovation Institute (AII), Uganda National Association of Professional Scientists (UNAPS), Science Foundation for Livelihoods and Development (SFLD), Afrislum Uganda (AUg), Alliance for Food Sovereignty in Africa (AFSA), Educate! (Edc), African Wildlife Foundation (AWF), African Forum for Agricultural Advisory Services (AFAAS), African Diversity and Inclusion Center (ADIC), Agency for Community Empowerment (AFCE), Caring Heart for Women and Children (CHWC) had the lowest power and influence among the category of NGO/CSO sector actors in the STI ecosystem.

Uganda National Chamber of Commerce and Industry	UNCCI	Hive colab	HC
Afri Banana Products Ltd	ABP	Enterprise Uganda	EU
Renewable Energy Business Incubator	REBI	Women in Technology Uganda	WITU
Uganda Manufacturers Associations	UMA	KACITA Uganda	KACITA
Innovation Village	IV	Airtel Uganda	AU
The Kampala Angel Investment Network	KAIN	Umeme Limited	UL
Outbox Hub	OH	Uganda Clays Limited	UCL
Social Innovations Academy	SIA	BIDCO Uganda	BIDCO
Financial Sector Deepening Uganda	FSDU	Uganda Breweries Limited	UBL

In Figure 33, the analysis of the level of power and influence for the stakeholder in the **media** stakeholders shows that New Vision (NV) has the highest power and influence among the media stakeholders. Uganda Broadcasting Corporation (UBC) had the lowest power and influence score in the same category. The findings highlight the vital role the media plays in fostering national conversations about how the country's technological progress can improve employment prospects, business formation, and job growth.

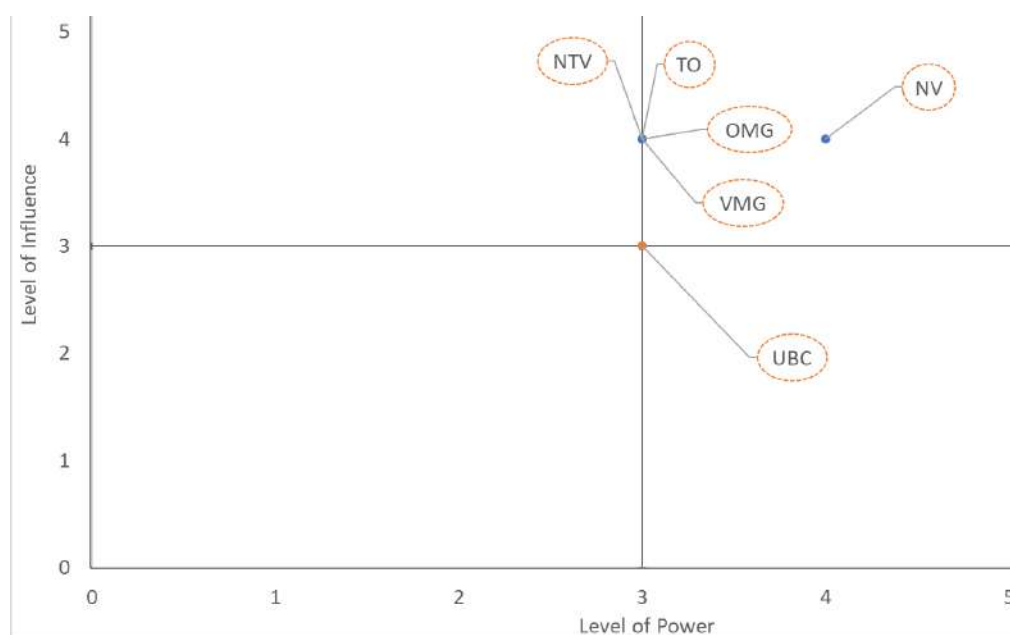


Figure 33: The level of Power and Influence among Media Actors in Uganda

New Vision	NV
NTV Uganda	NTV
Uganda Broadcasting Corporation	UBC
Observer Media Group	OMG
Vision Media Group	VMG
The Observer	TO

3.3.7.2 Best practices for stakeholders in Uganda

-Recognition of innovation platforms as development stimuli: In Uganda, the Innovation Platforms (IPs) have stimulated the development of agricultural enterprises since their inception due to their emphasis on value chain development networking, and partnerships (Woodhill, 2014). Globally, IPs have been viewed as vehicles for increasing the impact of technological innovations in the agricultural sector (van Paassen et al, 2014). In Uganda, it has not been any different. The experiences from farmer field schools, learning alliances, local agricultural committees, and natural resource management platforms have helped foster agricultural innovation by facilitating and strengthening interaction and collaboration in networks of farmers, extension officers, policymakers, researchers, NGOs, development donors, the private sector and other stakeholder groups. The ripple effect is enhanced employment opportunities in the agricultural sector.

-Liberalization of the coffee sub-sector: Coffee is one of the most important cash crops in Uganda playing a major role in the livelihoods of many people in the country accounting for about 20–30% of foreign exchange earnings (UCDA, 2013). The coffee sub-sector in Uganda is fully liberalized with a strong government commitment to its growth which offers several investment opportunities at national and international levels (UCDA, 2013). The coffee value chain is characterized by small-scale traders (aggregators), farmer groups, middlemen (processors and

merchants), and small and large coffee exporters (UCDA, 2013). In the public domain, the services to the coffee sub-sector are segmented among Uganda Coffee Development Authority (UCDA) for regulation, the National Agriculture Research Organisation (NARO) for research, and the Directorate of Agricultural Extension Services (DAES) through local government production departments for extension services. All three institutions are under the Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF, 2013). The liberalization of the sector frees it from the structural bottlenecks that hinder the growth of cash crop production in the country. This attributes to a large number of households (over 500,000) that depend on coffee production hence increasing job creation in the sub-sector.

-Enhanced national campaign drives to encourage the improvement of production in the agricultural sector: To revitalize Uganda's agricultural sector, national campaigns were launched to improve agricultural production in various sub-sectors and marketing in Uganda. Several stakeholders across the spectrum collaborated to ensure that the campaign was fruitful. For instance, to revive the coffee sub-sector, 21 innovation platforms were established to fill the void resulting from the collapse of the cooperatives and parastatal bodies in the coffee sub-sector (Café Africa, 2009). The objectives of the platforms were to promote the adoption of improved coffee varieties and recommend agronomic practices, re-introduce and promote collective activities, strengthen the coffee value chain as well as advocate for increased investment in the sub-sector (Café Africa, 2009). This was replicated across the agricultural sector to enhance innovation in the sector and create more job opportunities for the burgeoning population.

3.3.7.3 Challenges and Opportunities for effective Stakeholder contribution to job creation in Uganda

-Limited access to funding: Limited access to funds is one of the major factors hindering technological innovation in the informal sector. Financial institutions have not been supportive of the informal sector even though the sector contributes over 40% of the gross national product and employs close to 2/3 of the population (Bukonya et al, 2014). This has resulted in limited technological innovations and a low number of quality and sustainable jobs created in the sector. Facilitating access to formal financing channels such as micro-credit could be an overriding step to encourage informal entrepreneurs to shift toward more formal economic activities.

-Weak institutional linkages hindering growth in various sectors of the economy: The existence of weak institutional linkages amongst the organisations have led to inefficiencies in the agricultural sector. The decentralization policy legalized by the Local Government Act of 1997, led to the devolution of powers and responsibilities from central to local levels. Although devolution is always hailed for bringing the resources down to the people if not well managed it can be a recipe for larger problems that end up negating the original purpose of devolution. For instance, although agricultural extension services were devolved, their impacts are rarely felt as the districts do not have the necessary capacity to support farmers. The human resource was not devolved making it hard for better service delivery to the rural poor (MAAIF, 2016). If this pattern is to be reversed, it will be necessary to conduct capacity building and training on various aspects based on the needs of each institution.

-Low investment in sectors that have the potential to provide numerous employment opportunities: Agriculture is the most common source of employment in Uganda, employing approximately 66% of the workforce. The service and industrial sectors employ approximately 28% and 7% of the labour force, respectively. Even though agriculture employs the majority of young people, less than 5% of those employed in agriculture are paid. The vast majority of workers are subsistence, earning no wages. Stakeholders eager to address Uganda's high unemployment rate have promoted their initiatives in silos. For example, while agricultural initiatives align well with BUBU policy, BUBU coordination is handled by the Ministry of Trade, Industry, and Cooperatives. It would be preferable if a BUBU department was placed across various ministries to assist them in capitalizing on opportunities identified in the sectors in which they are actively involved. This will assist ministries in charge of various sectors in promoting local innovations that will provide more opportunities for youth.

3.3.8 Zimbabwe

The institutional arrangements for STI in Zimbabwe are currently in a state of transition and reform. In recent years, there have been efforts to restructure and strengthen the existing institutions, as well as to establish new ones, to improve their effectiveness and impact. One of the key institutional developments in this area has been the creation of the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) in 2017. This ministry was formed through the merger of the Ministry of Higher and Tertiary Education and the Ministry of Science and Technology Development, with the aim of creating a more coordinated and integrated approach to STI policy and planning. Another significant development has been the establishment of the Zimbabwe National Innovation Fund (ZNIF) in 2019. The ZNIF is a government-owned venture capital fund that aims to provide

funding and support to innovative start-ups and SMEs in Zimbabwe. There have also been efforts to strengthen and restructure existing institutions such as the Scientific and Industrial Research and Development Centre (SIRDC) and the National Biotechnology Authority (NBA), to improve their capacity to support research and innovation in Zimbabwe. However, there are still some challenges in the institutional arrangements for STI in Zimbabwe. These include a lack of funding and resources, limited coordination and collaboration between different institutions, and a shortage of skilled human resources. Addressing these challenges will require sustained investment and support from both the public and private sectors, as well as a commitment to ongoing reform and improvement.

Several key institutions in Zimbabwe are involved in promoting STI and contributing to technological innovation, job creation, skills development, and entrepreneurship. Some of the key institutions in the different stakeholder categories are provided in Annex 1(h).

3.3.8.1 Key STI stakeholders' powers and influence in Zimbabwe

There are many stakeholders in the STI ecosystem in Zimbabwe as has been mapped in the previous section for the different categories of stakeholders. Respondents in this study were asked to rate the level of power and influence for the different categories and the results are presented below in power-influence grids.

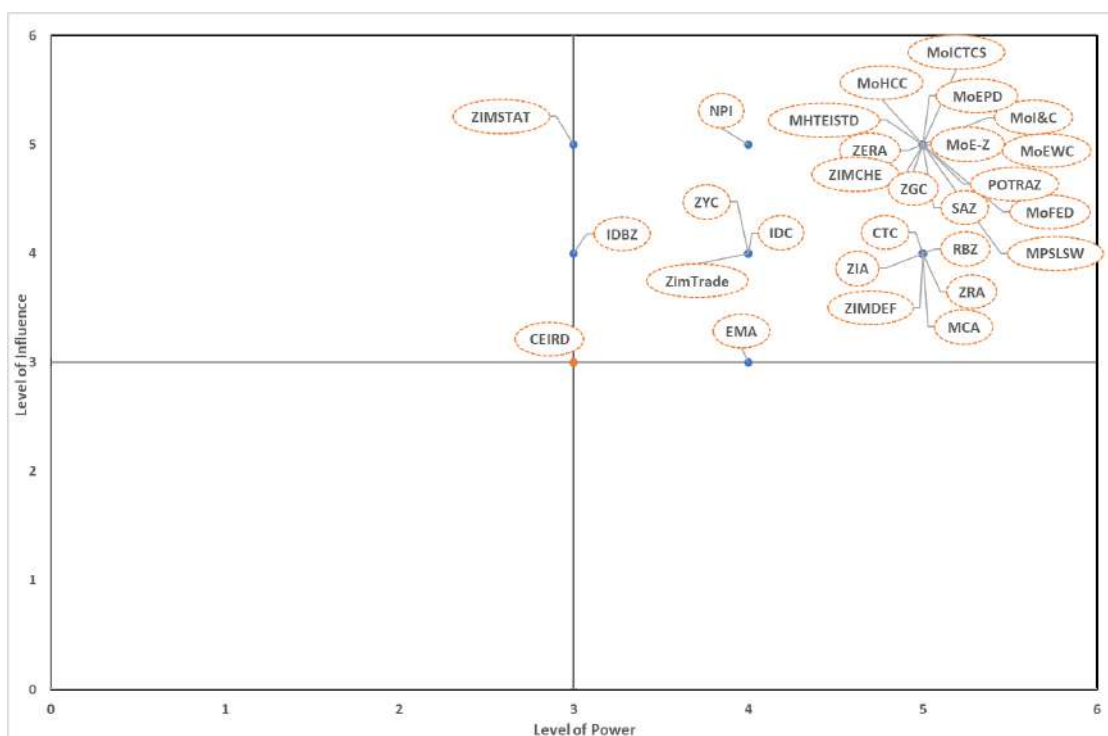


Figure 34: The level of Power and Influence among Government stakeholders in Zimbabwe

Ministry of Education	MoE-Z	Industrial Development Corporation	IDC
Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development	MHTEISTD	Ministry of Health and Child Care	MoHCC
Ministry of Public Service, Labour and Social Welfare	MPSLSW	Zimbabwe National Statistics Agency	ZIMSTAT
Ministry of Industry and Commerce	MoI&C	Infrastructure Development Bank of Zimbabwe	IDBZ
Ministry of Finance and Economic Development	MoFED	Zimbabwe Manpower Development Fund	ZIMDEF
Ministry of Environment, Water and Climate	MoEWC	Zimbabwe Council for Higher Education	ZIMCHE
Ministry of Information Communication Technology and Courier Services	MoICTCS	Zimbabwe Revenue Authority	ZRA
Ministry of Energy and Power Development	MoEPD	Reserve Bank of Zimbabwe	RBZ
Zimbabwe Energy Regulatory Authority	ZERA	Medicines Control Authority of Zimbabwe	MCA
Environment Management Agency	EMA	Competition and Tariff Commission	CTC
Centre for Education Innovation Research and Development	CEIRD	Zimbabwe Investment Authority	ZIA
Standards Association of Zimbabwe	SAZ	Zimbabwe Gender Commission	ZGC
National Productivity Institute	NPI	Zimbabwe Youth Council	ZYC
Postal and Telecommunications Regulatory Authority of Zimbabwe	POTRAZ		

Among the **Government institutions**, the key ministries, departments and agencies were rated highest in terms of power and influence. These were joined at the top by the Zimbabwe Council for Higher Education (ZIMCHE),

Zimbabwe Energy Regulatory Authority (ZERA), Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) and Zimbabwe Gender Commission (ZGC). Most of the institutions are within the high power-high influence quadrant except the Centre for Education Innovation Research and Development (CEIRD) and Environment Management Agency (EMA) (Figure 34).

Research institutions were rated as shown in Figure 35 below. Just like the government actors, research institutions were rated to have high power and influence. This is with the exception of Gwanda State University (GSU), Catholic University-Zimbabwe (CU-Zim), Reformed Church University (RCU), Zimbabwe Defence College (ZDC), Solusi University (SU), and Zimbabwe Ezekiel Guti University (ZEGU) that were rated to have moderate power and influence.

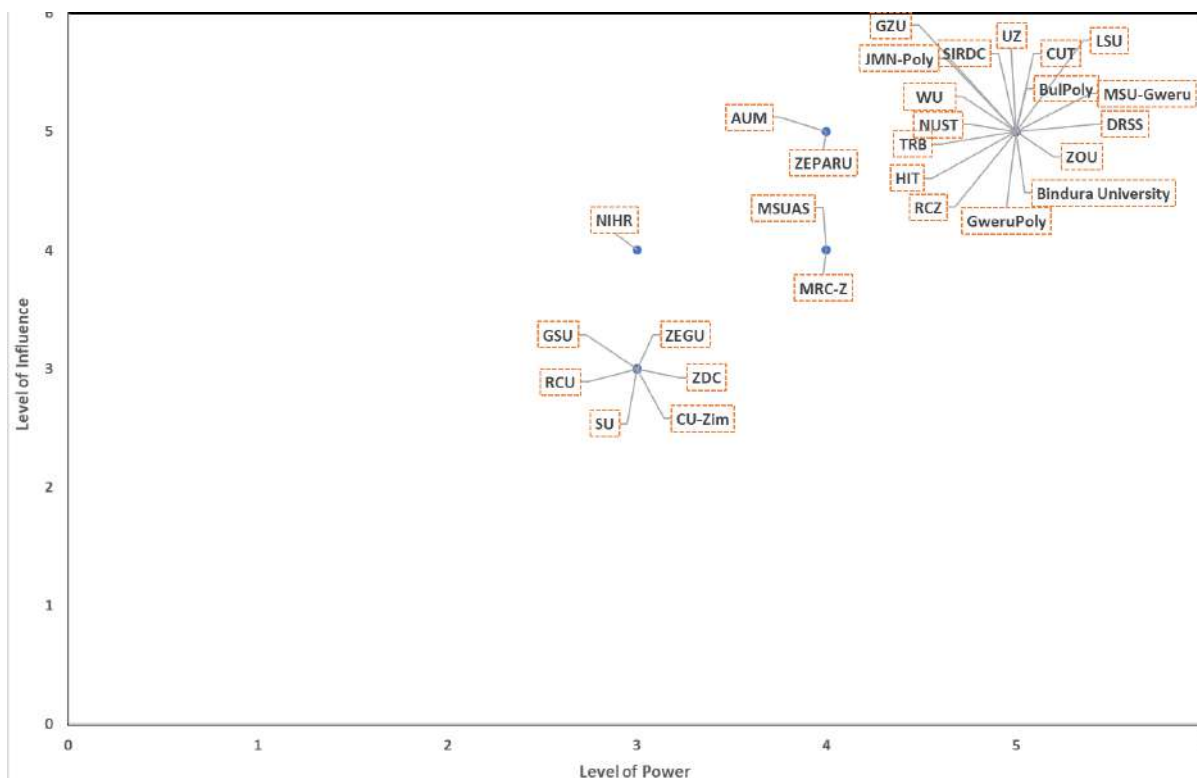


Figure 35: The level of Power and Influence among Research Institutions in Zimbabwe

Bulawayo Polytechnic	BulPoly	Gwanda State University	GSU
Gweru Polytechnic	GweruPoly	Women's' University	WU
Joshua Muqabuko Nkomo Polytechnic	JMN-Poly	Zimbabwe Open University	ZOU
Department of Research and Specialist Services	DRSS	Catholic University	CU-Zim
National Institute for Health Research	NIHR	Reformed Church University	RCU
Medical Research Council of Zimbabwe	MRC-Z	Zimbabwe Defence College	ZDC
University of Zimbabwe	UZ	Solusi University	SU
National University of Science and Technology	NUST	Zimbabwe Ezekiel Guti University	ZEGU
Chinhoyi University of Technology	CUT	Harare Institute of Technology	HIT
Midlands State University Gweru	MSU-Gweru	Zimbabwe Economic Policy Analysis and Research Unit	ZEPARU
Lupane State University	LSU	Research Council of Zimbabwe	RCZ
Africa University, Mutare	AUM	Scientific and Industrial Research and Development Center	SIRDC
Great Zimbabwe University	GZU	Tobacco Research Board	TRB
Manicaland State University of Applied Science	MSUAS		

Figure 36 shows the rating of power and influence among NGOs/CSOs that were mapped in Zimbabwe. All the big international NGOs have high power and influence except OXFAM International which was rated to have high power but moderate influence. Among the local NGOs, Campaign for Female Education (CAMFED) and Elevate were rated lowest for both power and influence. They were perceived to have moderate power and influence. The Zimbabwe Christian Youth in Action (ZICYA), Women Alliance of Business Associations in Zimbabwe (WABAZ), Women in Communities (WICO) and Silveira were perceived to be influential but with moderate powers.

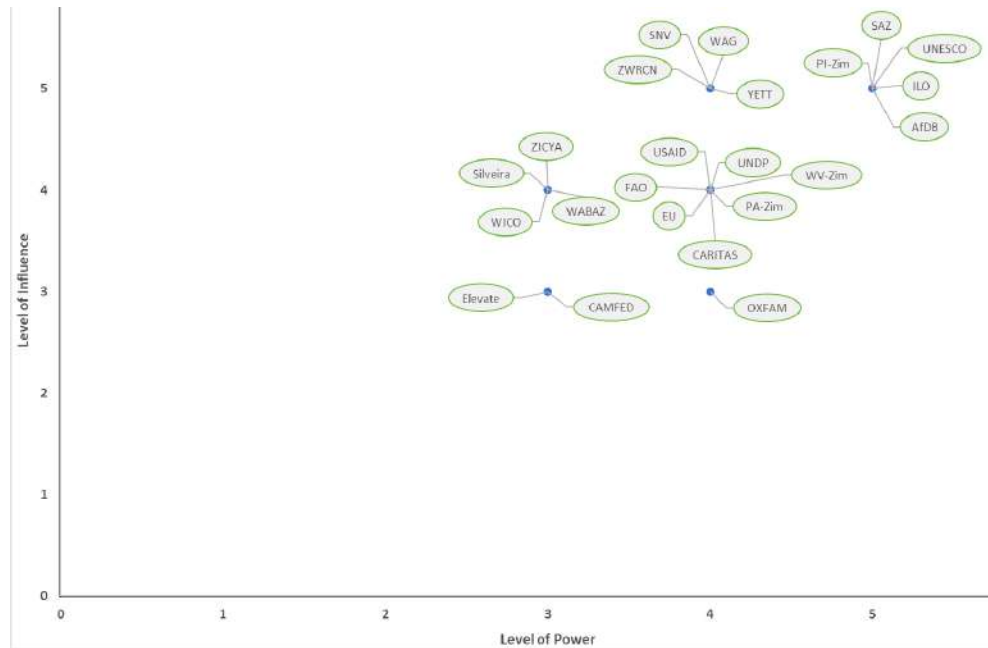


Figure 36: The level of Power and Influence among NGOs and CSOs in Zimbabwe

Standards Association of Zimbabwe	SAZ	Silveira House	Silveira
Zimbabwe Christian Youth in Action	ZICYA	Youth Empowerment and Transformation Trust	YETT
Women Alliance of Business Associations in Zimbabwe	WABAZ	Campaign for Female Education	CAMFED
Women in Communities	WICO	UN-Food and Agriculture Organization	FAO
Women's Action Group	WAG	USAID	USAID
Zimbabwe Women's Resource Centre and Network	ZWRNCN	UNESCO	UNESCO
International Labour Organization	ILO	United Nations Development Programme	UNDP
Practical Action	PA-Zim	African Development Bank	AfDB
World Vision	WV-Zim	OXFAM International	OXFAM
Plan International	PI-Zim	European Union	EU
Stichting Nederlandse Vrijwilligers (Foundation of Netherlands Volunteers)	SNV	International Confederation of Catholic Organizations for Charitable and Social Action	CARITAS
Elevate trust	Elevate		

Private sector actors were also rated by the respondents as shown in Figure 37. Econet wireless was rated highest for power and influence while Telecel was rated lowest for both power and influence. Bancabc Innovation hub (Bihub) and Dandemutande were also rated lowly for influence and moderately for power. The rest of the private actors were rated highly for both power and influence and fall in the high power-high influence quadrant.

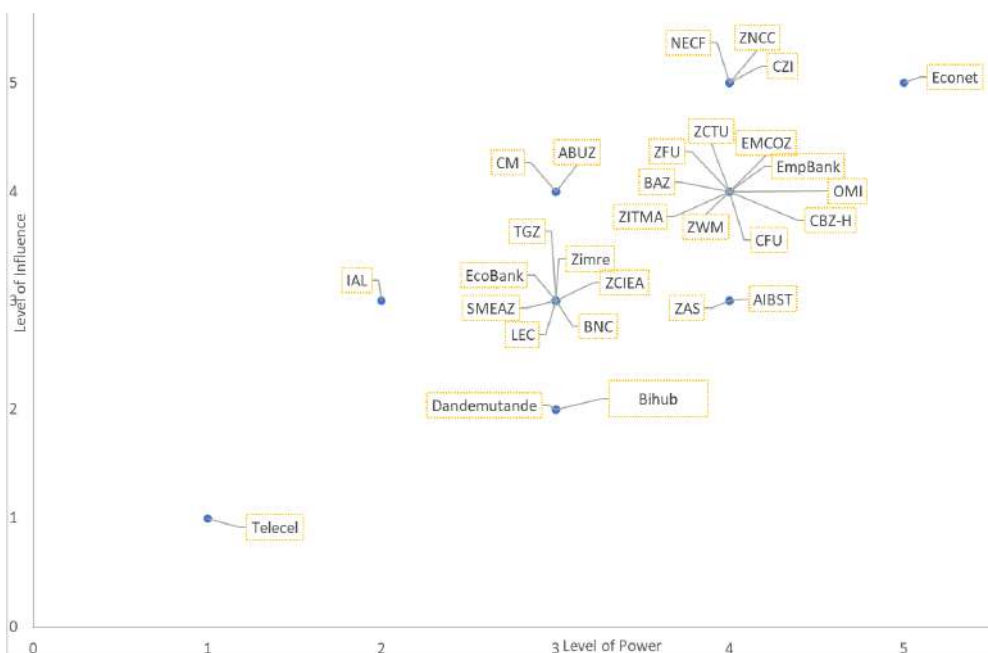


Figure 37: The level of Power and Influence among Private Sector Institutions in Zimbabwe

Bankers' Association of Zimbabwe	BAZ	Econet Wireless	Econet
Chamber of Mines	CM	Technovation for Girls Zimbabwe	TGZ
Commercial Farmers' Union	CFU	Innscore Africa Limited	IAL
Zimbabwe Farmers' Union	ZFU	Bindura Nickel Corporation	BNC
Confederation of Zimbabwe Industries	CZI	Bancabc Innovation hub	Bihub
Zimbabwe National Chamber of Commerce	ZNCC	Zimre Holdings	Zimre
Zimbabwe Textile Manufacturers Association	ZITMA	Old Mutual Insurance	OMI
The Association for Business in Zimbabwe	ABUZ	CBZ Holdings	CBZ-H
Zimbabwe Chamber of Informal Economy Associations	ZCIEA	Africa Institute of Biomedical Science and Technology	AIBST
SME Association of Zimbabwe	SMEAZ	Empower Bank	EmpBank
Employers' Confederation of Zimbabwe	EMCOZ	Zimbabwe Women's' Microfinance	ZWM
Zimbabwe Congress of Trade Unions	ZCTU	Zimbabwe Agriculture Society	ZAS
National Economic Consultative Forum	NECF	LEC Biotech	LEC

3.3.8.2 Best Practices for Stakeholders in Zimbabwe

Zimbabwe has made significant progress in the implementation of STI in recent years. Several factors have contributed to this progress, including policy reforms, increased funding for research and development, and improved collaboration between academia, industry, and government. Here are some of the key factors that have led to the successful implementation of STI in Zimbabwe:

-Positive STI Policy Reforms: Zimbabwe has implemented several policy reforms to promote STI. For instance, the National Science and Technology Policy, which was launched in 2012, seeks to promote innovation, increase research and development funding, and improve collaboration between industry and academia. The policy also aims to strengthen the country's scientific infrastructure and establish a national innovation system (NIS).

-Increased funding for research and research infrastructure: The Zimbabwean government has increased funding for research and development, with the aim of promoting innovation and improving the quality of research. The government has also established a Science and Technology Fund, which provides grants for research and innovation projects.

-Provision of technical and research-based solutions: The government has shown commendable seriousness in the setting up of innovation hubs at six of its universities. This initiative is significant as it intends to direct higher and tertiary education in the country towards becoming actively involved in the revival of the country's economy.

-Enhanced collaboration among key actors in the NIS: Zimbabwe has improved collaboration between academia, industry, and government, which has led to the development of innovative products and solutions. For instance, the government has established innovation hubs, which provide a platform for innovators and entrepreneurs to interact and share ideas.

-The country has placed emphasis on entrepreneurship as a means of promoting innovation: The government has established entrepreneurship programs that provide training, mentoring, and funding for entrepreneurs. These programs have contributed to the creation of innovative start-ups in the country.

-Human Capital Development: Zimbabwe has made efforts to develop its human capital, particularly in the area of science and technology. The country has established science and technology universities, which provide training and education in science and technology fields. Zimbabwe has also prioritized the training of science and technology teachers in primary and secondary schools.

3.3.8.3 Challenges and Opportunities for effective Stakeholder contribution to job creation in Zimbabwe

-Legislative and macro-economic settings (such as patent law, taxation, corporate governance rules – and policies relating to interest and exchange rates, tariffs and competition): Since 2009, the government has implemented initiatives to boost revenue collection but has taken little action to reduce spending. 70% of government spending is allocated to recurring costs. This leaves only 30% of Zimbabwe's earnings for Capital investment. How much of this has been allocated to innovation? Two-thirds of innovative and strategic thought must be devoted to building the future, while one-third must be devoted to the present and the past. This basic statistic illustrates the short-term nature of Zimbabwe's macroeconomic and legal conditions.

-Poor industry structure and the uncompetitive environment: This includes the existence of supplier firms in complementary industry sectors. As a result of various factors Zimbabwe is still focused on primary production. Despite having the potential to develop secondary and tertiary industrial systems that potential remains untapped.

One reason for this may be the huge skills gap. This provides an opportunity for stakeholders with the mandate to skilling youth to tap into this. The government needs to put in place a conducive environment to allow these actors to up their efforts in skills development and job training. Facilitating collaboration and engagement with industry/private sector and education stakeholders will highly enhance identification of the gaps in skills to fix the skills mismatch.

-Lack of a coherent policy review framework: Despite the Ministry of Education, Sport, Arts and Cultures' bid to make it compulsory to take at least one of the technical and vocational subjects at O Level, this was reversed through the Secretary's Circular Number 14 of 2002, which shifted the emphasis towards humanities, making technical and vocational subjects optional at secondary school level. These types of policies that are made haphazardly without evidence have had detrimental effects on skills development, entrepreneurship and job creation. Stakeholders must participate actively in policy dialogue and advocacy to retract some of the retrogressive policies. Failure to implement policies has become too familiar, and targets of certain policy frameworks are not achieved owing to lack of implementation. An example of this is the Small, Micro and Medium Enterprises (SMMEs) Policy and Strategy Framework that was not implemented resulting in the development of a follow-up policy framework: the Micro, Small and Medium Enterprise Policy and Strategy Framework: 2008-2012.

-Lack of resources to implement some policies: The implementation of the technical and vocational policies has been made difficult by the lack of resources. The technical and vocational education policies of 2001 and 2022 left the initiative to individual school heads depending on the availability of facilities and staff, and learner preferences. With limited resources, most school heads allocated minimal funds to technical and vocational subjects. This calls for a review of the policies and more government and other stakeholder investments in these areas to unlock the potential of youth to engage in other more practical jobs that may be readily available.

-Lack of synergy between researchers and policymakers: The government feels that research institutions and civil society do little to engage policymakers when identifying research priorities but expect the government to make use of their research findings. The government and researchers need to collaboratively identify evidence gaps and research priority areas. This will aid in dual ownership and evidence is more likely to be used. They should also package information for stakeholders at different levels as they all possess different levels of comprehension.

4. CONCLUSION AND RECOMMENDATIONS

4.1 General Conclusion

This study was conducted to identify the key actors in the STI ecosystem in enhancing technological innovation, skills development for employability, job creation and entrepreneurship in seven (7) countries in Africa. The roles, linkages, power and influence were determined amongst the five (5) major stakeholder categories namely: Government/Policy makers, Private sector/industry, Research, NGOs/CSOs and the media. Key international development partners were also identified. This was achieved through rigorous and elaborate methodological approaches to capture the details of how countries have set up an institutional framework for technological innovation skills development, job creation and entrepreneurship cutting across the different national priority sectors. This included desk studies, KIIs, online surveys and FGDs. The findings reveal that all the case study countries have established institutional frameworks that are aimed at implementing STI policies to enhance technological innovation, skills development, job creation and entrepreneurship, especially among the youth. This is through established NIS where actors are drawn from the five (5) stakeholder categories in the study countries. The stakeholders mapped in the different countries have different levels of power and influence and thus, will have different capacities to contribute to policy and practice. Ideally, initiatives should target the institutions with high power and influence in the ecosystem but at the same time ensure that the other actors with relatively medium to low power and influence are carried along. This is informed by the fact that the level of power and influence is not static but dynamic. Numerous challenges have been identified that have contributed to poor or non-optimal delivery of services hence leading to failure in achieving the set national goals. Some of the challenges include the low capacity of the institutions and the technical capacity of employees to deliver on their mandates, poor funding from the government to support institutions, lack of appropriate policy framework and platform for engagement and collaboration of different stakeholders, weak interlinkages among stakeholders even with the same stakeholder category and duplication of mandates. Each study country has a set of challenges that need to be addressed and have been highlighted in the report. On a positive note, it is important to recognise the huge strides that countries have made to establish policies and institutions to support this sector. This has been done through national, regional and international initiatives that are being implemented with significant results throughout sub-Saharan Africa. The SGCI for instance has supported many African countries to establish and build the capacity of SGCs at the national level. This initiative has been a huge success in Kenya, Uganda, Ghana, Senegal and Zimbabwe whereas Nigeria is in the process of establishing its SGC through the initiative.

4.2 Proposed Policy and Institutional Recommendations

It has been established that there is no shortage of institutions working in the STI ecosystem that support technological innovation, skills development, job creation for the youth and entrepreneurship in the study countries. That notwithstanding, the countries have developed some form of system that they expect will deliver optimally to achieve their STI goals nationally. However, this has not always been the case. This study identifies key areas that governments and key stakeholders in the STI ecosystem need to work on. We proffer the following recommendations:

- i) ***Encourage inclusive participation of all stakeholders in the STI ecosystem thereby enhancing skills development and youth employment:*** The national commissions and the respective responsible ministries need to mobilize stakeholders to develop structures for formal and informal participation in matters relating to STI so as to stimulate technological innovation, encourage skills development, and create job opportunities, especially for the youth and entrepreneurship. It has been demonstrated in the study findings that there are many players in STI from NGOs and the private sector (Industry) that have contributed immensely to the development of the sector. However, there are weak linkages between and amongst these actors who can potentially be very productive in the sector. Industrial and STI policies must specify mechanisms to enhance system linkages between the various actors and ensure the successful implementation of these mechanisms. For instance, mechanisms that incentivize private sector engagement (co-publication, co-patenting and personnel mobility) with local stakeholders (industry experts and local researchers). In addition, governments should consider increasing liaisons with the private sector to identify the needs of private enterprises in order to encourage their participation in the NIS. The SGCI has been very instrumental in supporting these linkages and collaborations in Africa by supporting knowledge exchange with the private sector and strengthening partnerships between SGCs and other science system actors including development partners and the private sector.
- ii) ***Civil society actors and the media need to increase awareness and advocacy efforts to support mainstreaming of STI in government policies and programs to enhance youth employment:*** Although there have been significant awareness campaigns both at the continental and regional level, some countries are still struggling to

put in place STI policies that will provide a foundation for the implementation and development of STI in the key prioritised sectors. Achieving this, requires strong media campaigns, exhibitions, competitions, and the establishment of technological parks and incubation centres. More information needs to be availed out there to inform the masses on the role of STI in national development. It has been demonstrated that awareness creation leads to higher demands for accountability from the informed public and therefore pushing for more reforms that compel the relevant stakeholders to act. More informed policymakers and actors will always push for the incorporation of STI and related aspects in plans, strategies and even policies that they formulate.

- iii) Liaise with key stakeholders to develop Robust Indicators for measuring progress in youth employment emanating from the implementation of STI Policies, Plans and Programmes:** Countries have always developed policies but failed to develop the corresponding implementation frameworks, strategies and plans. These plans usually have an elaborate Monitoring and Evaluation (M&E) section that contains key indicators that are critical in measuring progress. This will provide a basis on which countries can track how they are progressing and quickly put measures in place to rectify areas where they are scoring lowly. The Global Innovation Index (GII) sets good precedence in this and can as well be strengthened to capture more relevant data on job creation and entrepreneurship. Governments and key stakeholders also need to take seriously these indices conducted globally or continentally to identify areas of weakness in order to put more effort into those areas for purposes of improvement in the subsequent surveys.
- iv) Strengthen the capacity of national institutions to adequately implement STI policies and programs geared towards the creation of jobs for the youth:** Each country needs to establish a strong national institution mandated to handle matters of STI. Such a body needs to be responsible for national and international coordination of STI matters through relevant government ministries. It should be able to organise STI annual conferences where participants from different parts of the country or continent showcase their skills. This would require increased capacity building to improve the capacity of staff in these institutions to be able to effectively handle STI-related issues. A good example of an initiative in Africa is the SGCI which has been supporting most of the study countries to build their capacity for research and evidence-based policy development that will contribute to economic and social development.
- v) Invest in the necessary infrastructure, equipment and human resource capacity to support STI and entrepreneurial training:** The right infrastructure and laboratory equipment are vital to efficiently and effectively carry out research and training. All the study countries do not currently have sufficient institutions and facilities that provide training in STI-related courses and entrepreneurship. There is need for the respective governments to tap into available opportunities nationally and internationally to develop these. Initiatives such as Kigali Innovation City would be highly productive in enhancing this. Also, governments need to encourage the participation of the private sector, NGOs/CSO and international development partners to support these initiatives. None of the countries has fulfilled their promise of contributing 1% and above of their GDP to R&D as resolved in the Lagos Plan of Action. There is need to prioritise this to achieve the goals and targets set in the key development documents of the respective study countries.

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ANNEXES

Annex 1: List of Stakeholders Mapped in each study country

a) Ethiopia Stakeholders

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
Government			
1.	Ministry of Innovation and Technology (MInT)	Establishes a system that enhances the participation and role of the private sector in the development of innovation and technology sector and creates a conducive environment for the implementation. The other role of the Ministry in STI development is establishing and implementing a system for the grant of awards and incentives to individuals and institutions contributing to the advancement of innovation and technological development works.	Mr. DestaAbera, Director desta.abera2001@yahoo.com Mr. NurelignKoku, Director nurelegnkoku@gmail.com Mr. MulugetaWube mulgjohn1@gmail.com Mr. BabeshaKenaw bkenaw@gmail.com
2.	Oromia Science and Technology Authority	Conducts studies in the area of science, technology and innovation policy; promotes technology transfer and development and undertakes capacity-building activities.	Dr. LijalemAyele lij.2009@yahoo.com
3.	Ministry of Finance	Initiates policies, strategies and laws that serve as a base for fiscal, particularly for taxes and custom duty laws; prepares detailed programs compatible with national development plan and follows up their proper implementation. The Ministry prepares the fiscal budget of the Federal Government; makes disbursements in accordance with the approved budget and evaluates the utilization of the budget	Dr. Eyob Tekalign infopr@mofed.gov.et
4.	Ministry of Industry	Creates an enabling system for enhanced participation of the private sector in industry and devises mechanisms for providing incentives to make small and medium enterprises effective.	Mr. Admassu Yifru Admassu380@gmail.com
5.	Ministry of Agriculture	Establishes a system for the promotion of private sector participation in agricultural practices and development of the sector and creates conducive condition for the establishment of rural financial system accessible to farmers, pastoralists, and semi-pastoralists and to private sector actors engaged in agricultural activities.	Dr. Meles Mekonnen info@moa.gov.et
6.	Ministry of Labour and Skills	Establishes a system for technical and vocational training, labour, employment and skill development.	Mr. Solomon Tadesse Mr. Ewenetu Feleke ewenetu@gmail.com
7.	Ministry of Health	Supports the expansion of health services coverage; follows up and coordinates the implementation of health programs; provide appropriate support to research activities intended to provide solutions for the country's health problems and for improving health service delivery.	Mr. Naod Wondirad info@moh.gov.et
8.	Ministry of Water and Energy	Undertakes policy studies, surveys and research needed to create a conducive environment for	Mr. Olkeba Bashe olkebabashe@gmail.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
		the implementation of integrated water resource management within basins; and is also responsible for their implementation. It is also the responsibility of the Ministry to establish a system to enhance participation and role of the private sector in potable water supply and sanitation and infrastructure development and creates a conducive condition for the implementation of these activities	
9.	Ethiopian Space Technology and Geospatial Institute	Contributes to the development of the national economy by providing creative and social services to Ethiopians and improving their living conditions in the field of space science and technology, in astronomy and astrophysics, on earth view global, and providing competitive research in aeronautics and astronomy, manpower training and international relations.	Mr. AbdisaYilma Director General amiyene@gmail.com Phone: +251-911743573
10.	Ministry of Education	Ensures effective, quality and equitable education and training system through building the implementation capacity of the education sector at all levels, designing and regulating standards of efficiency, expanding standardized education throughout the country, as well as complementing and leveraging education sector development interventions with strategic communications and public awareness.	Dr. Solomon Benor Director General solomon.benor@ethernet.edu.et
11.	Higher Education Relevance and Quality Agency	Ensures a high-quality and relevant higher education system in Ethiopia.	Dr. DunkanaNegussa dunkana11@yahoo.com
12.	Ethiopian Intellectual Property Authority	Facilitates the provision of adequate legal protection for and exploitation of intellectual property in the country and collects, organizes and disseminates technological information contained in patent documents and encourage its utilization.	Dr. ErmiasYemaneberhan yermiasyemane@gmail.com Mr. Girma Bejiga gsebeta821@gmail.com
13.	Institute of Ethiopian Standards	Develops national standards for local products and services so as to make them internationally competitive.	Solomon Woubshet info@ethiostandards.org
14.	Ethiopian Accreditation Service	Provides an internationally recognized, cost-effective, national accreditation service within the borders of Ethiopia to support the credibility of the National Quality Infrastructure	Mr. Araya Fesseha info@eas-eth.org
15.	Ethiopian Conformity Assessment Enterprise (ECAE)	ECAE is the major conformity assessment enterprise in the country providing, testing laboratory, inspection, and certification services to the industry and the public	Mr.Mulugeta Mehari info-cd@ecae-e.com
16.	Ethiopian Metrology Institute	Provides calibration and measurements, scientific equipment maintenance, and training and consultancy services.	info@eas_eth.org
17.	Ministry of planning and Development	Prepares long-term indicative development plan, formulates medium and short-term development programs based on the plan and oversees its implementation and coordinates policies' research and development initiatives.	Mr. Sandokan Debebe ethiopdc@gmail.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
18.	Ethiopian Environmental Protection Authority	Works towards the creation of a system and ensures implementation of environment and forest resources management, development, utilization and its sustainable contribution to poverty reduction. It also conducts research and technology transfer and awareness-raising activities.	Dr. GetahunGaredew getahun.garedew@epa.gov.et
19.	Ministry of Urban and Infrastructure	Undertakes studies relating to urbanization; establishes systems for integrated urbanization; follows-up implementation. The Ministry also establishes a system for the management of the integration of urban centres in compliance with the national and regional development plan and integrated urban master plan.	Mrs. Zewdinesh Dejene klimat047@gmail.com
20.	Ministry of Mines	Coordinates the activities of organizing minerals, petroleum and natural gases exploration and geophysical data; causes its accessibility to investment and development. The Ministry also works in collaboration with educational institutions and other concerned organs to produce trained manpower required in the development of minerals, petroleum and natural gases.	info@mom.gov.et
21.	Ministry of Irrigation and Low Land	Encourages irrigation projects to be supported by innovative technologies that will enhance productivity and to adopt mechanisms for effective use of water. It establishes a system for expanding irrigation development coverage and follow up its implementation.	Dr. Berhanu Lenjiso MILLs@gmail.com
22.	Ethiopian Biodiversity Institute	Conservation, research and utilization of biodiversity.	Dr. Samson Shimelis samata2000@gmail.com
23.	Ethiopian chemical industries corporation	Manages state-owned chemical manufacturing enterprises	chemindcorpo@cic.gov.et
24.	Entrepreneurship Development Institute	Facilitates the realization of the entrepreneurship development goals of the government through building the institutional capacity of government and private sector institutions which have a stake in entrepreneurship and private sector development and youth empowerment to help them improve the business environment for enterprise and private sector development.	Dr. Hassan Hussein info@edi-ethiopia.org
25.	Ethio-telecom	A government-owned company serving as the major internet, telephone and other related services provider.	Wubshet Belachew wouba.2002@gmail.com
Private Sector Actors			
26.	IceAddis	Facilitates space for creative potential, testing of uncommon ideas and experimenting with prototypes to find a market-product fit, as well as complex problem-solving through a co-simplicity model. It also encourages a collaborative mindset, to realise the potential of its young technology community and enable active participation in changing their local	Mr. Markos Lemma markos.lemma@iceaddis.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
		environment and gaining economic empowerment.	
27.	Center for Entrepreneurship & Innovation (St. Mary's University)	Focuses on expanding the work on entrepreneurship and innovation through facilitating the teaching and learning of fundamental knowledge and skills required for innovation, creativity, strategic thinking, and decision-making; conducting innovative research on the theory and practice of identifying and capitalizing on emerging business opportunities, both individually and within corporate settings; and promoting a dynamic community interaction built on teamwork, excellence, integrity, and a quest for life-long learning.	P. O. Box 18490/1211 0115 53 80 20/0115 53 80 17 smu@smuc.edu.et
28.	Debub Global Bank	Provides credit to entrepreneurs.	National Tower, Ras Abebe Damtew St P.O. Box:100743, Addis Ababa, Ethiopia +251-115-581-245/17 info@debubglobalbank.com
29.	BblueMoon	Discover, nurture, and fund exceptional agribusiness ideas among youth that are innovative, scalable, and have huge transformational potential.	METI Building, 8th floor Namibia Avenue (between Edna Mall and Atlas Hotel) Bole sub-city Addis Ababa, Ethiopia +251-11-667-4810 info@bluemoonethiopia.com
30.	Growth Africa	Providing experience and expertise in designing and delivering activities and programmes for Ethiopian entrepreneurs.	Impress Hotel Bole sub-city, Cameroon Street, Woreda 03 House No. New Adjacent to Medhanialem Cathedral Addis Ababa, Ethiopia +251 (0) 945 453 050 +251 (0) 945 453 050 WhatsApp: +251 (0) 945 453 050 info@growthafrica.com
31.	Addis Ababa Angels Network	A group of individual investors who get involved in financing innovative ideas for products and services. The network offers equity investment, mentorship and diverse expertise to launch and grow businesses.	Addis Alemayehou info@addisababaangels.com
32.	RENEW	Find promising businesses, invest in them and strive to grow them into world-class companies.	renew@renewstrategies.com
33.	Enterprise Development Center (EDC)	Bring about a transformational change that accelerates the realization of their growth potential through entrepreneurial skills training, training of trainers and training of business advisors.	Addis Ababa (Headquarters), Nega City Mall Building (Infront of Zemen Bank) 3rd Floor Kazanchis, Addis Ababa. +251-115-571-150 info@edcethiopia.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
34.	Startup Factory Ethiopia	Identifying the best entrepreneurial talent in Ethiopia and providing them with the necessary infrastructure, relationships, mentorship, coaching, operational support and effectively simulating a vibrant entrepreneurial ecosystem for their ventures & entrepreneurs.	Dembel City Center Office No. 509. Africa Ave, Addis Ababa - ET +251 1 234567890. info@startupfactoryethiopia.com
35.	Ethiopian Leather Industries Association	Promoting export of leather, shoes and leather goods and garment, protecting the rights of members, and assisting businesses to improve.	Mr. Solomon Getu Elia.aalf2@gmail.com
36.	Ethiopian Textile and Garment Manufacturers Association	Fosters the creation of enabling business environment, fair playing field and ethical business practices in commerce, trade and services in the sector through evidence-based advocacy, networking and information exchange, expanded services, capacity building and ensuring adherence to quality.	Mr. AgeaziGebreyesus Ageazi.etgma@gmail.com
37.	BfarmTech	A digital agribusiness startup	Begashaw Mebrate meberateson@gmail.com
38.	Midroc Investment Group	Invests in the agricultural and agro-industrial sector, mining, manufacturing, infrastructure and natural resources with emphasis to further develop the sectors and enhance their efficiency and export earning capacities.	Mr. Hussein Ahmed migpr@midrocinvestmentgroup.com
Non-Governmental and Civil Society Organizations			
39.	The Ethiopian Academy of Sciences (EAS)	Promotes the development of science, technology, and innovation in Ethiopia through the promotion of research and the development of scientific and technological expertise.	Professor Teketel Yohannes teketel.yohannes@eas-et.org Abebe Mekuriaw abebe.mekuriaw@eas-et.org
40.	Society for Technology Studies	A professional association that works towards enlarging the policy options for decision makers in Ethiopia in a wide range of science, technology and innovation issues.	Wondwossen Belete wondwossenbel@yahoo.com
41.	ECatalyst	Transforming developing communities through their entrepreneurs by helping entrepreneurs grow their business in a way that inspires more people to try new ideas and grows a culture of growth-oriented business creation	Mr. Amen Temesgen amen.temesgen@ecatalyst.org
42.	Emmanuel Development Association	An organization working to improve the lives of children, youth and women by supporting their education, access to water, sanitation and hygiene, community health and youth livelihood programs in agriculture	Mr. Yonas Ashagari yonas.ashagari@gmail.com
43.	Ethiopian Young Academy of Sciences	Identifies brings together and supports young scientists and scholars to champion excellence and innovation in national scientific research and promote interdisciplinary collaboration and representation among young scientists in Ethiopia.	Dr. Birhanu Beshah birhanu.beshah@aait.edu.et bireabesha@yahoo.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
44.	Startup Ethiopia	A start-up ecosystem platform to showcase Ethiopia's growing and dynamic start up scene to the world	Dr. EleniGebremedhin startupethiopia@blumoonethiopia.com
45.	ICog-Labs	An artificial intelligence research and development company.	BetlehemDessie hruy@icog-labs.com
46.	Setaweet	Articulates Ethiopian feminism and creates the space for dialogue, research, and activism by Ethiopian women and men.	Yodit Tamene submissiontozhhigh@gmail.com
47.	Christian Aid	Focused on increasing wealth creation opportunities and building livelihood resilience for poor and marginalized people, particularly pastoral and agro-pastoral communities.	Norwegian Church Aid Compound, WelloSefer Ethio-China Friendship Ave, Addis Ababa, Ethiopia +251 11 50536850/1/2 ethiopia-info@christian-aid.org
48.	Reach for Change Africa	Unleashing the power of social entrepreneurship and innovation to make Ethiopia a better place for children and youth.	6th Floor, Ten Sister NGOs Building; Gurd Shola Addis Ababa ethiopia@reachforchange.org +251 118 222 212 or +251 929 107 877
49.	The Ethiopian Society of Physics (ESP)	Promotes the development of physics in Ethiopia through the organization of conferences, workshops, and other events, as well as the provision of grants and funding for research projects.	Dr. Chernet Amente chernetamente@gmail.com
50.	The Ethiopian Society of Chemical Engineers (ESCE)	Promotes the development of chemical engineering in Ethiopia through the organization of conferences, workshops, and other events, as well as the provision of grants and funding for research projects.	Dr.Eng.Lemma Dendena lemma@eschenew.com
51.	The Ethiopian Society of Electrical engineers	Promotes the development of electrical engineering in Ethiopia through the organization of conferences, workshops, and other events, as well as the provision of grants and funding for research projects.	Dr. GashawTefera elect.society@gmail.com
52.	Digital Opportunity Trust	Support youth to become innovators and leaders, and to create and apply digital solutions that have positive impact on their communities.	Bole Subcity, Woreda 04, House No. 378 (GMA Building 2nd Floor) P. O. Box 27601 Code 1000, Addis Ababa, Ethiopia +251 116 673 259/+251 116 673 260 ethiopia@dotrust.org
53.	ACORD Ethiopia	Works with the people of Ethiopia towards building empowered communities where people secure sustainable livelihoods.	Hayahulet Mazorya Addis Ababa P.O. Box 12377 Addis Ababa, Ethiopia +251 11618 1566/+251 11663 5775 info@acordethiopia.com
54.	Center for Accelerated Women's Economic Empowerment	Building the capacities of women in business, with a focus to export market operating at different levels, through the provision of different kinds of support services.	Bole Sub-city, Woreda 3, Abyssinia Plaza Building, 7th Floor, P. O. Box: 41293, Addis Ababa, Ethiopia

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
			+251116674100 info@cawee-ethiopia.com
55.	Addis Ababa Chamber of Commerce and Sectoral Associations	Promotes trade and investment by providing demand-driven services to the best satisfaction of members, stakeholders and others and advocates for favourable business environment based on best practices.	P. O. Box. 2458 Addis Ababa, Ethiopia +251-115-518055 info@addischamber.com Mr. Seyoum Chane Manager, Policy research seyoum.chane@addischamber.com +251115-518055
56.	Ethiopian Chamber of Sectoral Associations	The apex body of manufacturing and sector-related chamber in Ethiopia is the single most important and largest industrial sector.	Mrs. Almaz Zergaw info@ethiocsa.net
57.	Ethiopian Chamber of Commerce and Sectoral Associations	Creates an enabling business environment and capacity in which the business community plays a leading role in the economy through evidence-based dialogue and partnership.	Mengistu Wubie mengestuwubie@gmail.com Wubie
58.	Ethiopian Youth Entrepreneurs Association	Enhances the role of youth entrepreneurs' association in the development of private sectors Ethiopia by 2030.	Ms Samiya Abdulkadir samiya.abdulkadir@etyea.com Hermela G. Egziabher her21gegziabher@gmail.com
59.	Ethiopian Public Health Association	A health professionals association that promotes better health services to the public and high professional standards through advocacy, professional competence, relevant policies, and effective networking	Mr. Yusuf Abdu yusufabdu3@yahoo.com
60.	Youth Network for Sustainable Development (YNSD)	YNSD is an umbrella Network for more than 160 youth organizations/associations at national level. It works in the areas of information and communication technology, environment, water, sanitation and hygiene.	Solomon Woldegerima solomon.w@ynsdethiopia.org . et Mrs.Melkam melkamuabush@gmail.com
61.	Action for Social Development and Environmental Protection Organization (ASDEPO)	ASDEPO works in the areas of education, health, women and youth economic empowerment, water, sanitation and hygiene (WaSH).	Meherteab Blaye mihreteab.belay@asdepo.org
62.	STEM Power Ethiopia	Provides a hands-on lab-based STEM education that emphasizes real-world problem-solving, creativity, and skill-building empowering youth to engineering their homeland away from stubborn poverty.	Dr. Simenew Keskes drsimenew@yahoo.com
63.	Ethiopian Economics Association	Undertakes research and organizes short-term trainings on various issues that are of critical importance to Ethiopia's economic development.	Demrew Getachew demirewget@yahoo.com
64.	Ethiopian Evaluation Association	A network of individuals, groups and organizations that have come together and have an interest in all matters related to program evaluation	Dagnachew Amberbir dagnu96@gmail.com
65.	Ethiopia Society of Mechanical Engineers	Promotes the profession of mechanical engineering and contributes to industrial development and mechanization in the country	Esme.hulet@gmail.com
66.	Forum for Social Studies	Promotes original research and publication addressing opportunities and challenges in Ethiopia's development path.	Dr Yeraswork Admassie yeraswork@yahoo.com fss.ethiopia@gmail.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
	Research Institutions		
67.	Addis Ababa University (AAU)	Higher education, research and community services.	Dr. Shumye Berhe uil.tt@aaau.edu.et Dr Teklehaimanot H/SELASSIE tekle1961@yahoo.com ; teklehaimanot.hselassie@aaau.edu.et Mr. TadesseGetachew tadessegetm@yahoo.com Dr. Kamil Dino Adem kdadem@gmail.com
68.	Policy Studies Institute	Conducts rigorous research and policy analysis that provide knowledge-based inputs to policymaking and policy implementations and disseminates its research outputs and findings to the policy and research community, academia, the development community, and other stakeholders.	Dr. Amare Matebu Lead researcher ipsc@psi.gov.et +251-115506066
69.	Ethiopian Artificial Intelligence Institute	Fosters the Development of a nationally recognized AI ecosystem.	Mr. Getnet Shewa getnetshewa@gmail.com
70.	Armaur Hansen Research Institute	Aims to improve medical care; health and well-being of the public by generating and delivering scientific evidence, developing new tools and methods through biomedical, clinical, and translational research, and serving as a hub for technology transfer and capacity building in medical research and training.	Prof. Afework Kassu afework.kassu@ahri.gov.et Dr. Alemseged Abdissa alemseged.abdissa@ahri.gov.et
71.	Jimma University (JU)	Higher education, research and community services	Ebise Getachew ebiseg@gmail.com
72.	Adama Science and Technology University	Higher education, research and community services.	International Relations and Corporate Communications irccd@astu.edu.et
73.	Addis Ababa Science and Technology University	Higher education, research and community services.	Mr. Yelshaday Regasa Yelshaday.regasa@gmail.com
74.	Wollo University	Higher education, research and community services.	Bewuketu Minwuye bewuketum38@gmail.com
75.	Gondar University	Higher education, research and community services.	Dr. Amir Alelign aleamiro2009@gmail.com
76.	Arba Minch University	Higher education, research and community services.	Mr. Yohannes Solomon Fasil yohannessolomon8@gmail.com
77.	Hawassa University (HU)	Higher education, research and community services.	Dr. Beyene Dobo beyeneashl@yahoo.co.uk
78.	Bahir Dar University	Higher education, research and community services.	Dr. Melaku Wale melakuwale@gmail.com
79.	Africa Medical College	Higher education	Dr. KassahunKebede kassahunkbd@yahoo.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
80.	Werabe University	Higher education, research and community services.	Mr. Abdi Abayneh Umer umerabdi2018@gmail.com
81.	Debre Berhan University	Higher education, research and community services.	Dr. TesfaWorkuMeshesha hopee2011@gmail.com
82.	Dilla University	Higher education, research and community services.	Dr. Abraham Alemayehu abrham.alemayehu@yahoo.com
83.	Ethiopian Public Health Institute (EPHI)	This institute conducts research and provides technical assistance in the field of public health in Ethiopia.	Mr. AlemayehuTadesse info@ephi.gov.et
84.	Ethiopian Institute of Agricultural Research (EIAR)	Conducts research that provides market competitive agricultural technologies that contribute to agricultural productivity and nutrition quality, sustainable food security, economic development and conservation of the integrity of natural resources and the environment.	Dr. Adam Bekele adbk2012@gmail.com
85.	Southern Agricultural Research Institute	Develops, adapts and promotes agricultural technologies to ensure food security, and sustainable natural resource management.	Dr. Mathewos ashamom2003@gmail.com
86.	Ethiopian Forestry Development	Supports efforts to expand forest industries and to create market links for forest products in view of creating jobs, substituting wood product imports with local products and increase foreign currency earnings by promoting export of forest products.	Mr. Berhanu Sugebo berhanusuge@gmail.com
87.	Ethiopian Bio and Emerging Technologies Institute	Supporting, organizing and directing various research works in biotechnology and emerging technologies.	Dr. Kassahun Tesfaye kassahun.tesfaye@aau.edu.et
88.	Haramaya University	Higher education, research and community services	Dr. Aemro Tazeze aemrot@gmail.com
89.	Wachemo University	Higher education, research and community services	Mr. Mulugeta Daniel muludani@gmail.com
90.	Dire Dawa University	Higher education, research and community services	Mr. YenehunTaye yenehun2003@gmail.com
91.	Kebri Dahar University	Higher education, research and community services	Mekuria Tsegaye mekukdu@gmail.com
92.	Jinka University	Higher education, research and community services	Mengistu Estifanos mengyestifano@gmail.com
93.	Bonga University	Higher education, research and community services	Mr. GetinetGezahegn gezahegngetinet@gmail.com
94.	Injibara University	Higher education, research and community services	Ayitenew Temesgen ayitenewt23@gmail.com
95.	Selale University	Higher education, research and community services	Bruktawit Mekonnen brukti1and5@gmail.com
96.	Debre Tabor University	Higher education, research and community services	Adina Nigatu adinanigatu@gmail.com
97.	Jijiga University	Higher education, research and community services	Dr. Bashir Abdulahi president@jju.edu.et
98.	Arsi University	Higher education, research and community services	Dr. Adem Kedir pr.arsiu@arsiun.edu.et
99.	Metu University	Higher education, research and community services	Dr. Solomon Tadesse stadesse37@gmail.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Contact information
100.	Wolkitie University	Higher education, research and community services	Dr. Faris Delil president@wku.edu.et
101.	Semera University	Higher education, research and community services	Dr. Betelehem Dagneu betelhem.dagneu@yahoo.com
102.	Selam Technical and Vocational College	TVET College	Mr. Solomon Chali, info@selamchildrenvillage.org

b) Ghana Stakeholders

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
Government			
1.	Ministry of Environment, Science, Technology and Innovation (MESTI)	Promote activities needed to underpin the standards and policies required for planning and implementation of sound scientific and technological development activities; Ensure the coordination, supervision, monitoring and evaluation of activities of Environment, Science, Technology and Innovation while fulfilling national benefits-sharing commitments; Set out the parameters required for programmes on science, technology and innovation in consultation with the National Development Planning Commission (NDPC) in guiding the Districts Assemblies as the planning authorities at the local level; Analyse and coordinate all planned programmes as well as budgets in the science, technology and innovation sector of the economy for purposes of achieving a single integrated management system; and Initiate, simulate and coordinate research including the continuous development and review of policies, laws, rules and regulations in science, technology and innovation sector of the economy.	Kwamena E. Quaison (Director, STI) +233244755867 kequaison@gmail.com quaison@yahoo.com kwamena.quaison@mesti.gov.gh Cephass Adjeh Mensah (Deputy Director, STI) +233244888566 cephass.mensah@mesti.gov.gh Judith Semabia (Programme Officer) +233244521926 judysem2@yahoo.com contact@mesti.gov.gh www.mesti.gov.gh
2.	National Development Planning Commission (NDPC)	Advise the President of the Republic of Ghana (and Parliament on request) on national development planning policy and strategy by providing a national development policy framework, preparing and ensuring effective implementation of approved national development plans and coordinating economic, and social activities country-wide in a manner that will ensure accelerated and sustainable development of the country to promote continuous improvement in the living standards of all Ghanaians.	Felix Addo-Yobo (Director, Environmental Policy) +233505093954 felix.addo-yobo@ndpc.gov.gh +233302773011-13 info@ndpc.gov.gh https://ndpc.gov.gh/about/
3.	Environmental Protection Agency (EPA)	The EPA has the mandate to decide on project screening, guide the conduct of any EA studies and grant environmental approval for road sector projects to commence. Its mandate also covers monitoring the implementation phase of road projects to ensure compliance with approval conditions, mitigation measures, and other environmental commitments and quality standards.	Dr Simon Sovoe (Deputy Director, Research Technology and Innovation) +233501301727 simon.sovoe@epa.gov.gh Ms Irene Opoku info@epa.gov.gh +233302 664697-8 +233302 662690 http://www.epa.gov.gh
4.	Ministry of Trade and Industry (MOTI)	Policy formulation; facilitating enterprise development including Micro, Small and Medium Enterprise (MSMEs); development and enforcement of standards in trade and industry; promoting and facilitating Ghana's internal and export trade with emphasis on diversification and value-addition; promoting and facilitating Ghana's active participation in Global Trade through participation in multilateral and plurilateral institutions as well as champion Ghana's market expansion drive; facilitating the development of the Private Sector; facilitating innovation and entrepreneurship with both formal and informal sectors to enhance factor productivity. the	Daniel Adjetej Sowah +233200981378 dsowah54@gmail.com +233302686528 info@moti.gov.gh https://moti.gov.gh/

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		Ministry is involved in activities geared towards production, commerce, and the creation of gainful employment.	
5.	Ministry of Business Development (MoBD).	The Ministry of Business Development (MoBD) is responsible for the initiation, formulation, monitoring, and evaluation of national policies and programs aimed at improving the entrepreneurial and technical skills of Micro, Small and Medium Enterprises (MSMEs) particularly the youth in line with the government's Economic and Social Development Agenda. The Ministry of Business Development was formed to create a sustainable and business-friendly, entrepreneurial and innovative business environment, that fosters private sector-led investment and job creation.	32 Gamel Abdul Nasser Rd Adj. Ghana Tourism Authority, Ridge, Accra +233 (0)302 665447 mobd@mobd.gov.gh https://mobd.gov.gh/
6.	The Nation Builders Corps (NABCO)	The Nation Builders Corps (NABCO) programme is a government initiative to address graduate unemployment to solve social problems. The focus of the initiative will be solving public service delivery in health, education, agriculture, technology, governance and drive revenue mobilization and collection.	Abafun Cres, Accra, Ghana Digital Address GL-026-0106 info@nabco.gov.gh +233278253386, 0278253387, 0547210487, 0547210488
7.	Ministry of Aviation	Formulate aviation policies for the development of the aviation industry; Promote innovation, research, and development as well as information management. Develop human resource capacity and new technologies for the sector.	+233 (0)302 774 995 info@moa.gov.gh http://moa.gov.gh
8.	Ministry of Employment and Labour Relations	Lead policy adviser to the government on employment and labour-related issues. Provision of employable skills through TVET.	info@melr.gov.gh +233 (0) 302 665 797 www.melr.gov.gh
9.	Ministry of Railway Development	To create an accessible, affordable, reliable, effective and efficient railway system that meets user needs. Develop and implement comprehensive and integrated policy to ensure sustainable development in the railway sector. Develop adequate human resources and apply new technology through innovation.	+233 302904840, +233302904841, +233302904855, +233302904850 development@mrd.gov.gh http://www.mrd.gov.gh/
10.	Ministry of Food and Agriculture (MoFA)	Formulate policy relating to agriculture and backstopping in the decentralised department and monitoring and evaluation. Application of STI in agricultural development-inputs, seeds, fertilizers.	Rowland Addo (Assistant Director) +233243679261 rowlandaddo@yahoo.com Comfort Yelipoie +233242564484 yelipoiecomfort@gmail.com info.isd@isd.gov.gh www.mofa.gov.gh
11.	Ministry of Finance (MoF)	Formulating and implementing sound fiscal and financial policies of the government and managing the economy. Mobilising and allocating financial resources.	Gladys M. Osabutey +233202030296 gghartey@mofep.gov.gh info@mofep.gov.gh Tel: +233302747197 www.mofep.gov.gh

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
12.	Ministry of Business Development (MoBD)	To facilitate the improvement of business in Ghana Promote the development of the MSME Sector for job creation. To increase the entrepreneurial capacity of the youths in partnership with the MESTI. To nurture, build and promote medium to large-size indigenous Ghanaian business giants.	+233 (0)302 665447 mobd@mobd.gov.gh https://mobd.gov.gh/
13.	Forestry Commission (FC)	Regulate the utilisation of timber resources; manages the nation's forest resources and protected areas; assist the private sector and other bodies with the implementation of forest and wildlife policies	www.fcghana.org
14.	Goil Company Limited (GOIL)	Market-quality petroleum and other energy products and services, promote youth employment and innovation.	www.goil.com.gh
15.	National Board for Small Scale Industry (NBSSI)	To play a leading role in the promotion and development of MSMEs in Ghana (ACT 434)	www.nbssi.gov.gh
16.	Ghana Free Zones Board (GFZB)	GFZB provides a one-stop service centre for Free Zone investors. The Board's main role is to facilitate, regulate and monitor activities in the Free Zones.	Mrs Patience A. Acorlor +233540121380 info@gfza.gov.gh https://gfzb.gov.gh
17.	Ghana Investment Promotion Centre (GIPC)	GIPC's role is to encourage and promote investments in Ghana, to provide for the creation of an attractive incentive framework and a transparent, predictable and facilitating environment for investments in Ghana.	No 1 Rangoon lane, Vivo place cantonment, Accra, Ghana. https://gipc.gov.gh/ info@gipc.gov.gh
18.	Ghana Standard Authority (GSA) formerly Ghana Standards Board	GSA is a Government of Ghana agency responsible for the maintenance of acceptable standards for products and services and sound management practices in industries and public institutions in Ghana.	(+233-302) 506991-5 / 500065/6 0303930649 Address: P O Box gsanep@gsa.gov.gh/ gsadir@gsa.gov.gh https://www.gsa.gov.gh/
19.	Ministry of Energy	The function of the ministry is to improve the distribution of electricity across the country, especially to communities and towns in rural Ghana. The ministry seeks to encourage the participation of the private sector in the development of energy infrastructure and secure future energy supply.	info@energymin.gov.gh +233 302683961 – 3 +233 276502239
20.	Ghana Skill Centre	A Government of Ghana skills development initiative for the promotion of youth entrepreneurship and employability.	NEIP Office: Nii Amarh Olennu Street, 4th Circular Street, Cantonments, Accra info@ghanaskillscentre.gov.gh +233 (0)29-900-3840 +233 (0)29-900-3842 +233 (0)29-900-3843 https://ghanaskillscentre.gov.gh/
21.	Youth Employment Agency (YEA)	Leads the coordination of employment opportunities and the creation of jobs for the youth in Ghana. Provide the avenue for STI implementation, technical backstopping or precaution and monitoring for skills development for employability	Main Head Office, Liberation Towers, Castle Road, Ridge, Accra info@yea.gov.gh (+233)030 223 5023 https://www.yea.gov.gh/

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
22.	National Entrepreneurship and Innovation Programme	The primary objective is to provide integrated national support for start-ups and small businesses. NEIP primarily focuses on providing business development services; start-up incubators and funding for young businesses to enable them to grow and become successful.	Nii Amarh Ollenu Street. Cantonment, Accra Ghana. Digital Address GL-043-5732, +233 26 116 4192 enquiries@neip.gov.gh www.neip.gov.gh
23.	Energy Commission	To promote competition in the supply, marketing and sale of renewable energy products and other forms of energy; To promote energy efficiency and productive uses of electricity, natural gas; and petroleum products; To license public utilities for the transmission, wholesale supply, distribution and sale of electricity and natural gas; and To secure a comprehensive database for national decision-making for the efficient development and utilization of energy resources.	(+233) 302813756/7 info@energycom.gov.gh https://www.energycom.gov.gh/
24.	Rural Enterprises Programme (REP)	Seeks to improve the livelihoods and incomes of rural poor micro and small entrepreneurs through increase in the number of rural, Medium and Small-Scale Enterprises (MSEs) that generate profit, growth and employment opportunities. This is achieved through (1) business development services accessible to MSEs in rural districts; (2) technical skills transferred, and technologies disseminated; (3) access of MSEs to finance ensured; and (4) MSE support institutions and policies in place	Kwasi Attah-Antwi +233244313727 kattahantwi@yahoo.co.uk
Research Institutions			
25.	Council for Scientific and Industrial Research (CSIR)	<ul style="list-style-type: none"> • To coordinate research and development in the CSIR and other science and technology institutions nationwide and cooperate in their research efforts. • To assist Government in the formulation of science and technology policies for the realization of its developmental objectives. • To advise the Minister (Ministry of Environment and Science) on scientific and technological advances likely to be of importance to national development. • To encourage, in the national interest, scientific and industrial research of importance for the development of agriculture, health, medicine, environment, industry and other service sectors and to this end to encourage close linkages with the productive sectors of the economy. • To encourage coordinated employment of scientific research for the management, utilization and conservation of the natural resources of Ghana in the interest of development. • To develop, package and disseminate science and technology information. • To commercialize research and development output and technologies in partnership with the private sector and other stakeholders. 	Position: Director General. pbosu@csir-forig.org.gh paul_bosu@yahoo.com Tel:+233-51-60123/60373 Dr Stephen Bekoe +233545105623 sbekoe2000@gmail.com Pamela Selormey +233208543137 pseloremey@gmail.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
26.	Institute for sustainable Energy and environmental solutions-(ISEES)	ISEES works to achieve access to modern, affordable and reliable energy products and services as a precondition for development. ISEES promotes access to clean energy (solar, clean cookstoves, and biogas ‘waste-to- energy’) for households and small enterprises in Ghana. ISEES also advocates for energy efficiency by promoting behavioural change communication and the deployment of efficient appliances for households and institutions in off-grid communities. ISEES seeks to reduce energy expenditure, deforestation and air-pollution by providing clean energy solutions with focus on bottom-of-the-pyramid households and agro-processing groups in rural and peri-urban areas.	University Box LG 658, University of Ghana, Legon, Accra Contact Details 0248737439 +233249492835 info@iseesghana.org director@iseesghana.org
27.	Oil Palm Research Institute, Ghana (OPRI)	The CSIR-Oil Palm Research Institute (CSIR-OPRI) is the foremost public institution in oil palm and coconut research in Ghana. The CSIR-OPRI generates scientific information and marketable technologies for sustainable production and value addition of oil palm and coconut commodities in Ghana. The Institute has the mandate to research on oil palm and coconut and is tasked to conduct sustainable and demand-driven research aimed at providing scientific and technological support for the development of the entire oil palm and coconut industries.	Mr. Emmanuel Andoh Mensah Ag. Director OPRI info-opri@csir.org.gh admin-opri@csir.org.gh +233-(0)24-622-3390 +233-(0)24-405-6473
28.	Food Research Institute (FRI)	Research into and development of technologies for value addition, and solutions to food safety and security issues in the value chain.	Prof. Charles Tortoe (Director) +233243241801 ctortoe@yahoo.co.uk +233302962068 +233243302980 info@foodresearchgh.org
29.	Crops Research Institute (CRI)	Develop and disseminate demand-driven technologies and build capacity for sustainable food and industrial crops productivity to enhance livelihoods. CRI has a broad research mandate covering all food and industrial crops. These include maize, rice, Cowpea, soybean and groundnut. Others are Cassava, Yam, Cocoyam, Sweet potato, Vegetables and Fruit crops, plantain and bananas	Prof M.B. Mochia +233242581005 http://cri.csir.org.gh/
30.	Water Research Institute (WRI)	WRI generates and provides scientific information, strategies and services toward the rational development, utilization and management of the water resources of Ghana in support of the socio-economic advancement of the country, especially in the agriculture, health, industry, energy, transportation, education and tourism sectors.	Prof. Mike Yaw Osei-Atweneboana https://wri.csir.org.gh/ wricidss@yahoo.com +233302775351 +233302775352 +233302779514 +233302779515 +233302775511
31.	Savannah Agricultural Research Institute (SARI)	SARI's mandate is to provide small-scale farmers in the three regions of northern Ghana (Northern, Upper East, Upper West) with appropriate innovations/options/technologies to increase their food production based on a sustainable production system, which maintains and/or increases soil fertility. The research mandate also includes the development of appropriate cropping systems, varieties of crops such as	+233243741968 https://www.sari.csir.org.gh/ wilhelm.kutah@csir.org.gh

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		maize, rice, sorghum, millet soybean, cowpea, groundnuts, Bambara groundnuts, cotton, vegetable crops, etc. which are adapted to the needs of farmers in the different ecologies of northern Ghana	
32.	Animal Research Institute (ARI)	The mandate of the CSIR-ARI is to develop and transfer technologies that promote livestock and poultry production in Ghana. The mission of CSIR-ARI is to inspire efficiency and entrepreneurship in the Ghanaian livestock industry through technology development and innovative interventions for food security and wealth creation.	http://ari.csir.org.gh
33.	Institute of Industrial Research (IIR)	CSIR-IIR with its unique combination of applied research and scientific instrumentation has a primary function to drive national development and global competitiveness in industry through scientific and technological research.	Dr Francis Boateng Agyenim +233302500193 fagyenim@csir-iir.com Ing Dr Mrs Margaret Mary Bruce-Mensah +233200660584 margaret.nimoh@gmail.com aboffour@hotmail.com https://iir.csir.org.gh director@csir-iir.com
34.	Institute of Scientific and Technological Information (INSTI)	To develop a national capacity and capability for efficient and effective provision of scientific and technological information on demand, for the benefit of research scientists, policy makers and industrialists in appropriately packaged form for national development. The institute is part of the CSIR.	Dr. Seth A. Manteaw Director, CSIR-INSTI +233 0302 780 709 insti@csir.org.gh
35.	Building and Road Research Institute (BRRI)	Promotes the conduct of demand-driven and problem-based research, and provides training and technology transfer that links effectively to the socio-economic development of the country, particularly the building, road and transport industry.	Director: Dr. Daniel Asenso-Gyambibi P. O. Box UP40, Kumasi, Ghana +233244190056 +233244190037 brriadmin@csir.brri.org
36.	Kwame Nkrumah University of Science and Technology, Kumasi, Ghana (KNUST)	KNUST exists to advance knowledge in science and technology through creating an environment for undertaking relevant research, quality teaching, entrepreneurship training and community engagement to improve the quality of life. We endeavour to maintain and strengthen our position as the premier Science and Technology University in the country leading in generating and exchanging new knowledge in innovation and technology and offering service to government, industry and society.	Prof. (Mrs.) Rita Akosua Dickson (VC), radickson.pharm@knust.edu.gh +233 - 3220 - 61831 regaca@knust.edu.gh
37.	Science and Technology Policy Research Institute (STEPRI)	STEPRI conducts research to provide knowledge-based information to contribute to the formulation and implementation of policies and programmes for socio-economic development based on STI. Over the years, CSIR-STEPRI has excelled in executing its mission and mandate by addressing the following five thematic programmes: • Monitoring and assessment of STI-related policies in the Ghanaian economy.	Dr. Adelaide Agyeman (Mrs): Principal Research Scientist, Deputy Director. amaagyeman@gmail.com +233 208185929 CSIR-STEPRI P. O. Box CT. 519 Cantonments - Accra

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		<ul style="list-style-type: none"> • Popularization of STI. • Commercialization, facilitating and diffusion of local technology and innovation. • Development and management of STI human resources and • Adoption, assimilation and transfer of appropriate technology. 	233-302-773856 / 779401 director@csir-stepri.org
38.	University of Professional Studies (UPSA)	Teaching and research in science, technology, and innovation. To provide and promote quality higher education and training in management and other related disciplines by leveraging a structured mix of Scholarship with Professionalism through teaching and research. It also focuses on incubation and innovation development in STI.	www.udsa.edu.gh +233303937542(4) media.unit@upsamail.edu.gh , https://www.facebook.com/upsaccra www.upsa.edu.gh
39.	Ho Technical University (HTU)	Train students, conduct practical or applied research, to acquire entrepreneurship skills, conduct practical or applied research	+233 0362026456 +233 0362028398 info@htu.edu.gh www.htu.edu.gh
40.	Sunyani Technical University (STU)	Teaching (Provide higher education in engineering science and technology-based disciplines, technical and vocational education and training, applied arts and related disciplines).	(+233) - 3520 27052 / 24924 enquiries@stu.edu.gh www.stu.edu.gh
41.	University for Development Studies (UDS)	UDS seek to intervene in the SME sub-sector of the Ghanaian economy in a manner that will achieve impact and scale. Consequently, the BIIC will provide an environment conducive to identifying, nurturing and mentoring SMEs by leveraging on available internal and external resources.	+23327-789-6282 biic@uds.edu.gh https://biic.uds.edu.gh/
42.	Centre for Entrepreneurship and Innovation Development (KTU)	Help students acquire entrepreneurial skills to establish their own business	https://ceid.ktu.edu.gh/contact-us
43.	Centre for Business Development, KNUST	Industrial and academic relations office to promote spin-off from departmental levels	https://ki-hub.com
44.	Ghana Institute of Management and Public Administration (GIMPA)	To provide higher and tertiary education, consultancy, and research and education	www.gimpa.edu.gh
45.	University of Cape Coast Business Incubator (UCC BI)	Produce leaders in entrepreneurship and small enterprise development in Ghana and beyond	www.cesed.ucc.edu.gh
46.	Lancaster University	Tertiary/Research Institution offering training in entrepreneurship in Agriculture, environment etc	Anthony N-yelkabong anyelkabong@yahoo.com +233206672404 https://lancaster.edu.gh
Private Sector			
47.	Peasant Farmers Association (PFAG)	The apex Farmer-Based Non-Governmental Organization in Ghana with the mandate to advocate for pro poor agriculture and trade policies and other issues that affects the livelihoods of small holder farmers	https://peasantfarmers.com/ +233 (0)552 663 648

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
48.	Savanah Young Farmers Network Agribusiness Innovation Hub (iHub)	Promotes innovation and technology transfer for agribusiness development, bridging the gap for access and adoption of modern technology in agriculture for agribusiness development. The organization is focused on Incubation and Innovation.	Moses Nganwani Tia +233372099379 info@savanet-gh.org www.savanet-gh.org
49.	Centre for Social Innovations	Supports social and educational innovation, community innovation and entrepreneurship.	+23337-209-9676. +233244 480 475 Info@Csighana.org www.csighana.org
50.	Dansyn Ghana Limited	To provide professional services to organizations, individuals and groups through training and skills development, capacity building, mentoring, coaching, and other growth support initiatives.	info@dansynghana.com (+233) 20 807 5749 www.dansynghana.com
51.	Enablis Entrepreneurial Network Ghana	To support SME entrepreneurs who create jobs in developing and emerging countries, leading to sustainable economic development. Through a unique entrepreneur development model: <ul style="list-style-type: none"> • Identification of SME entrepreneurs with high growth potential. • nurturing their professional and personal development. • and providing them with networking, coaching, mentoring and skills acquisition. 	+23330276909 Adriana.swanzy@enablis.org www.enablis.org
52.	Private Enterprise Foundation	Advocacy on behalf of companies and trains members to improve technical and management skills	www.pef.org.gh
53.	Venture Capital Trust Fund	To provide long-term financing to SMEs through venture capital financing companies, and to develop the venture capital industry	www.venturecapitalghana.com.gh
54.	Meltwater Entrepreneurial School of Technology.	Provides critical skills training, funding, and support in software development, business, and communications to Africa's tech entrepreneurs. Hubs are located in Accra, Ghana; Lagos, Nigeria; Cape Town, South Africa; and Nairobi, Kenya. MEST is funded by the Meltwater Foundation, the non-profit arm of Meltwater, a global leader in media intelligence and Outside Insight.	+233 20 201 4363 info@meltwater.org http://www.meltwater.org/
55.	Eqwip Hubs	Provision of innovation spaces that transform the youth through market-driven work skills and entrepreneurship incubators.	http://www.yci.org/ +1 416-504-3370 info@yci.org www.eqwiphubs.org
56.	Grassroots Hub	Accelerates grassroots innovations through co-creation. Collaboration and provision of support to build new thriving and passionate communities. Their role is to educate, innovate, and incubate eco-entrepreneurship and SDG innovations	+233 24 382 3177 Send message grassrootshubgh@gmail.com http://www.grassrootshubgh.net/
57.	HapaSpace	HapaSpace provides a supportive and dynamic community for entrepreneurs, freelancers, start-ups, early-stage businesses, social enterprises and business professionals. In addition to office desks & office space, it has a bevy of amenities and perks for members and the general public. Supports start-ups to move from just idea to full fledge business and provides co-working and event spaces.	+233 55 172 2411 support@hapaweb.com www.hapaspace.com
58.	Ho Node	Empowering young people with digital skills and innovation culture to build successful start-ups, create sustainable jobs and prepare for future jobs.	+233 20 759 7969 +233 54 510 1172 info@honode.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
			www.honode.org
59.	Hopin Academy	Providing training in ICT, communication and marketing for professionals and entrepreneurs.	+233-372028925, +233-552894625 info@hopinacademy.org www.hopinacademy.org
60.	i.Code	ICODE is a technology and business innovation hub that provides tailored technology and innovative entrepreneurship development training targeted towards the creation of start-ups, shaping ideas into feasible businesses and grooming talents to be market ready. We do this by providing the necessary resources needed for them to grow their ideas, build innovative solutions and provide quality services while addressing community problems.	Emmanuel Botchey Junior Tech Lead botchey@icodegh.com +233 242 158 675 www.icodegh.com
61.	Business & Entrepreneur Development Centre	To effectively promote an entrepreneurial culture and the building of globally competitive businesses in Ghana through the provision of practical and relevant training, needed resources and coaching.	TANOE Office, Odorkor, Adj. Gloryland Hotel, Accra, Ghana +233-244-512528, +233-307-034585 https://bedec.wordpress.com/
62.	Impact Hub	Their role is to create a thriving innovation ecosystem where people collaborate across organizations, cultures and generations to solve the grand challenges of our time. Support early-stage innovators' ideas to market.	+233 54 396 2412 accra@impacthub.net https://accra.impacthub.net
63.	Kumasi Hive	Support local innovation technology development, incubation, business development, co-working space and business capacity building.	Jorge Appiah, jorgeappiah@kumasihive.com freda@kumasihive.com , (+233) 24 956 9580 (+233) 32 249 6788 https://kumasihive.com
64.	Steward Investment	Provides HR, Business & Management Consultancy, advisory and consulting services to SMEs, corporate and individuals within its reach, to meet up with relevant and current organizational and business trends.	Linda Wunaki +233 243031836 linda2imbeah@yahoo.com
65.	SkyFox Ltd	Offers integrated aquaculture and crop production technologies for farmers in hilly terrain to improve on livelihoods and nutrition needs. Operates in Ghana, Guinea, Liberia and Sierra Leone	Patrick Apoya +233244472784 +233548096826 patrickapoya@gmail.com Dr Oliver Ujah oliverujah@gmail.com http://skyfoxservices.com
66.	Rancard Solutions Ltd	A software development company that specializes in mobile and web technologies, providing solutions for businesses and organizations in various sectors.	+233302782669 info@rancard.com https://rancard.com
67.	BlueCrest College	A private tertiary institution that offers training and education in technology, business, and management.	https://bluecrest.edu.gh +233263011390 +233302251150 28 Cola Street, Kokomlemle Accra
68.	mPedigree	A technology company that provides a mobile-based solution to fight against product faking, counterfeiting and diversion.	Bright Simons 2 Goldkeys Heights, Dzorwulu, Accra https://mpwdigree.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
69.	Busy Internet	A private company that provides internet services, including broadband and web hosting services.	https://busy.com.gh https://wsc.busy.com.gh +233302909856 +233302909654 +233243500584 No 66, Osu Badu Link, Dzorwulu Accra
70.	Afrifanom Formally Vokacom	A private company that specializes in software development, Content Aggregation, Financial Advisory, Agribusiness, Real Estate, IT consulting, and IT training.	Nana Osei Afrifa +233302313461 https://www.afrifanom.com info@afrifanom.com No 8, Sorghum Street, Dansoman, Accra
71.	AirtelTigo	A leading telecommunication company that provides services in Ghana such as mobile internet, telephone calls, mobile money, and other services.	+233260000100 https://airteltigo.com.gh info@airteltigo.com.gh Barnes Road, PMB TUC, Accra
72.	Association of Ghana Industries (AGI)	AGI is the umbrella body that regulates the activities of industries in Ghana. The body also lobbies the government of Ghana on issues that affect industries in the country	Seth-Twum-Akwaboah (CEO) setha@agighana.org +233302266596 +233302251266 +233302986730 agi@agighana.org https://agighana.org 42 Dr Isert Street, North Ridge
Non-Governmental Organizations/ Civil Society Actors			
73.	Ghana Alliance for Clean Cookstoves	<ul style="list-style-type: none"> • Promotes partnerships among members of the alliance and other actors to ensure synergy in influencing policies and stimulating actions that contribute to a vibrant cook stove industry and sustainable utilization of biomass. • Supports the development of a thriving national market for clean cookstoves. • Create a platform for enhancing capacity development of member and promoting best practices in the cook stoves sector. • Mobilizes resources for actors in the sector to upscale the production and distribution of clean cook stoves. • Strengthens coordination, innovative ideas, influence policy and enhance information sharing among members, state sector to upscale the production and distribution of clean an improved cook stove. • Creates a collective voice for actors in the clean cook stoves sector. • Promotes awareness and raise the profile of the sector's positive work in Ghana at the international level. • Standardizes issues in production, operations, implementation, technical requirements of products quality and services in the cook stoves sector. 	Adwoa Etsiwaa Sey ARS Roundabout, East Legon +233240276198 info@ghacco.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		<ul style="list-style-type: none"> Sensitizes and educate citizens on the benefits and importance of using clean cook stoves. 	
74.	Kumasi Institute of Technology, Energy and Environment (KITE)	<p>KITE is a leading non-profit development intermediary organization based in Ghana. Its core mandates are;</p> <ul style="list-style-type: none"> To promote policy research on technology, energy and the environment. Undertake training and the dissemination of information in the areas of energy, technology and environment. Provides project development and consulting services relating to technology, energy and environment. 	<p>Oyarifa Rd, Accra, Ghana +233 24 437 0345 info@kiteonline.net kiteonline.net</p>
75.	Farm Radio International	<p>Ghana has a very dynamic public sphere, facilitated by a well-developed network of internet providers and more than 500 radio stations. We have worked with more radio stations in Ghana than any other country, operating in multiple languages across all of the country's ten regions. In addition to our main office in Accra on the southern coast, we have a secondary office in Tamale, in the north, where there is more poverty, fewer public services, and greater wet and dry climate extremes. Across the country, we have led projects on a range of topics, including climate change, innovative e-extension methods and residential construction — some of which reach across borders into neighbouring countries. We have also conducted research here on the economic viability of agricultural radio programs. Our close relationship with the Ministry of Food and Agriculture has been critical to the success of many of these projects.</p>	<p>1404 Scott Street, Ottawa, Ontario K1Y 2N2, Canada info@farmradio.org partnerships@farmradio.org media@farmradio.org</p>
76.	Centre for Agriculture and Bioscience International (CABI)	<p>CABI is a non-profit intergovernmental development and information organization focusing primarily on agricultural and environmental issues in the developing world, and the creation, curation, and dissemination of scientific knowledge.</p>	<p>Victor Attuquaye Clottey Regional Representative, West Africa CABI, CSIR Campus, No.6 Agostino Neto Road, Airport Residential Area, P.O Box CT 8630, Cantonments, Ghana +233 (0) 302 797 202 v.clottey@cabi.org</p>
77.	International Fertilizer Development Center (IFDC)	<p>IFDC is an independent non-profit organization that combines innovative research, market systems development, and strategic partnerships to spread sustainable agricultural solutions for improved soil health, food security, and livelihoods around the world.</p>	<p>46 David Lilienthal Dr, Muscle Shoals, AL 35661 1100 17th St NW, Suite 800, Washington, DC 20036</p>
78.	International Water Management Institute (IWMI)	<p>IWMI is a research-for-development (R4D) organization, with offices in 14 countries and a global network of scientists operating in more than 30 countries. For over three decades, our research results have led to changes in water management that have contributed to social and economic development.</p>	<p>Office location: IWMI c/o CSIR Main Campus, Airport Residential Area, opposite Chinese Embassy, Accra, Ghana +233 (0)30 2784753/4 iwmi-ghana@cgiar.org</p>
79.	Alliance for a Green Revolution in Africa, Accra (AGRA)	<p>The work of AGRA in Ghana is in line with the Government of Ghana's Food and Agriculture Sector Development Policy (FASDEP II) and the 2nd Phase of the Medium-Term Agriculture Sector Investment Plan (METASIP II) in driving accelerated agriculture</p>	<p>Forster Boateng Regional Head West Africa CSIR Office Complex #6 Agostino Neto Road,</p>

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		modernization and sustainable natural resource management.	Airport Residential Area, PMB KIA 114 Accra, Ghana +233 (0) 302740660 info@agra.org
80.	International Institute of Tropical Agriculture (IITA)	IITA's mission is to assure food security for some of the world's poorest people and provide them with viable strategies that create real, long-term results for economic development and community stability, while building an ecologically sound future that takes into account the issues of climate change. At IITA, we are dedicated to alleviating these problems and working to transform agriculture in Africa.	Richard Asare Cocoa Scientist +233 303931 023 r.asare@cgiar.org CSIR Campus opp. Old Chinese Embassy Off Agostino Neto Road, Airport Residential Area Accra, Ghana.
81.	Chamber of Agribusiness	Supports smallholder producer-led cooperatives and agribusinesses with technical, market and regulatory services. Chamber of Agribusiness, Ghana represents member organizations in policy dialogues and multi-stakeholder platforms. Also serves as the voice of agribusiness industry (covering smallholder producer cooperatives and agribusiness value chain actors) with utmost commitment to playing a leadership role that is solely dedicated to enriching the agribusiness sector in Ghana, through deliberate advocacy, lobbying, capacity building and rural financing.	Anthony S.K Morrison CEO, Chamber of Agribusiness, Ghana info@agribusinesschamber.org No. 3 Ankua Mansah Link, Dzorwulu, Accra (Syecomp HQ premises) Office [Chamber of Agribusiness, Ghana]: +233 500 600 722 Farmer Morrison: +233 540 74 21 11 +233 247 07 99 69 +233 20 144 2191
82.	Ghana Institution of Engineering (GhIE)	A professional body of engineers that promotes the development and use of engineering in Ghana through training, research, and advocacy	+233302760867 13 Continental Road, Roman Ridge Accra secretariat@ghie.org.gh
83.	Ghana Association of Scientists Teachers (GAST)	A non-profit organization of professional science and technology teachers and laboratory technicians that promotes the development of its members in Ghana through education, research, and advocacy.	+233250402057 https://gastonline.net
84.	Ghana Tech Lab	A non-profit organization that promotes the development and use of science, technology and innovation in Ghana through training, research, and advocacy.	+233548983036 akwaaba@ghanatechlab.com https://ghanatechlab.com
85.	The African Institute for Mathematical Sciences (AIMS)	A pan-African network of centres of excellence for postgraduate education, research and public engagement in mathematical sciences.	Adelaide Asante (Chief Operating Officer) +233244567666 adelaide@aims.edu.gh info@aims.edu.gh https://aims.edu.gh Summerhill Estates, East Legon Hills, Accra
86.	The Linda Agyeiwaa Atiase Scholarship Fund for Girls (LAASFUND)	Their aim is to help girls fulfil their purpose by educating them. Less endowed girls are given the chance to attend University. The girls are placed in top corporations where they get work experience in their related area during the summer breaks. At the third year in the university, the girls are encouraged to partake in the study abroad schemes in	E Plaza 2 Building, Osu Badu Street, Dzorwolu, Accra, Ghana +233268282533 https://www.laasfund.org

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		other to help them appreciate other people's culture and gain exposure.	
87.	Sports and Youth Development Organization	Their aim was to provide an umbrella for the physically challenged, destitute, and less privileged youths in Ghana through activities like sports, education, healthcare and the art of helping one another. The objective of the organization is to bring assistance to humanity by supporting the material, sports, educational, and well-being of the poor physically challenged and the less privileged in Ghana	Address: Osu Badu Street Dzorwulu. E Plaza 2 Building, Accra, Ghana 0200830444 P.O. Box AN 16859, Accra North Ghana, Accra +233244382006 www.sydogh.org
88.	Ghana Life Savers Organization	Its purpose is to help build a better future for the poor, left alone to face the world on their own	P.O Box CO 373, Tema Main, Tema, Ghana +233-20-8239738 www.glifesavers.com
89.	Informed Choice Foundation Ghana	This organization is mostly concerned about the youths.it was set up in 2017 Informed Choice Foundation Ghana is a developing youth headed Non-profit, non- governmental organization in Ghana that works to empower the Ghana youths through access to information and to create a platform that will bring opportunities and grow the quality of life of young people.	Kasoa, Down-Town, KD 195/9, Accra, Ghana Phone: +233246848226 www.informedchoicefoundationgh.org
90.	International Organization on Migration (IOM)	The activities of IOM Ghana focus mainly on assisted migration and development, migration health services, voluntary return and reintegration, cultural orientation, counter-trafficking, emergency assistance, and resettlement.	House. 10, Plot 48, Osu Badu Road, Broadway, Accra, Ghana +233.302 742 930 www.iom.int/cms/ghana
91.	Rural-Urban Partnership for Africa (RUPFA)	Its primary objective is to fight poverty in Ghana at the rural communities especially. The NGO also function in some areas of West Africa as follows: Benin, Burkina Faso, Liberia, Nigeria, and Sierra Leone. But their major areas of operations include research, policy analysis, community development, environmental protection, advocacy, training, and development.	Address: P.O. Box KN 4926, Kaneshie, Accra-Ghana. +233205087444 +233246542139 Website: www.rupfa.org

c) Kenya Stakeholders

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
	Government		
1.	Ministry of Education	Provides, promotes and coordinates quality education, training and research; and enhances the integration of Science, Technology and Innovation into national production systems for sustainable development.	Dr. Esther Thaara Muoria Principal Secretary, State Department for Technical, Vocational Education and Training. +254-020-3318581 dte.moe2017@gmail.com
2.	Ministry of Finance and Planning	Provides Leadership in Economic and Public Finance Management, and development planning for shared growth through formulation, implementation and monitoring of economic, financial and development policies.	Dr. Chris Kiptoo Principal Secretary, National Treasury 020 2252299 info@treasury.go.ke communications@treasury.go.ke
3.	Ministry of Trade and Industry	Creates an enabling environment for a globally competitive, sustainable Industrial, enterprise and Co-operative sector through appropriate policy, legal and regulatory framework.	Dr. Juma Mukhwana Principal Secretary State Department for Industry +254 20-2731531 ps@industrialization.go.ke cs@industrialization.go.ke
4.	Ministry of Youth, Culture and Sports	Leader in nurturing and empowering youths and sports persons, building a better Kenya.	Mr. Ismail Maalim Madey Principal Secretary State Department of Youth Affairs +254 020 2251164 psoffice@minspoca.go.ke csoffice@minspoca.go.ke
5.	Kenya National Innovation Agency (KENIA)	Strengthens inter-relationships between actors in order to promote innovation and enterprise development out of research and ideas. The agency also works with partners to ensure appropriate prioritization, relevant capacity development, innovation recognition and publication of the same.	Dr. Tonny Omwansa Chief Executive Officer +254-792 446 976 tomwansa@gmail.com info@innovationagency.go.ke
6.	Kenya Industrial Property Institute (KIPI)	Promoting Inventiveness in Kenya and providing Industrial Property training.	John Onyango Ag. Managing Director +254702002020; 0736002020 info@kipi.go.ke
7.	Kenya Bureau of Standards (KEBS)	Provides standards-based solutions that promote innovation, trade and quality of life.	Lt. Col. (Rtd) Bernard N. Njiraini Managing Director and Council Secretary +254722202137 /0734600 471/2 PVOC: 0724 255 242 info@kebs.org
8.	Kenya ICT Authority	Enforcing ICT standards in Government and promoting ICT literacy, capacity, innovation and enterprise.	Zilpher A. Owiti Director Partnerships, Innovation & Capacity (+254) 020 667 6200 (+254) 020 667 6300 info@ict.go.ke communications@ict.go.ke
9.	National Commission of Science, Technology	Regulating and assuring quality in the science, technology and innovation sector and advising the Government in matters related thereto.	Prof. Walter Oyawa Director General +254792 746282

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	and Innovation (NACOSTI)		oyawaw@yahoo.com customercare@nacosti.go.ke / info@nacosti.go.ke
10.	Kenya Communications Secretariat	Promotes the benefits of technological development to all users of postal and telecommunication facilities.	Daniel Obam Communication Secretary +254202719953 info@ncs.go.ke
11.	Communications Authority	Facilitates the development and management of a national cyber security framework and the development of e-commerce.	Ezra Chiloba Director General +254703042000/+254730172000 info@ca.go.ke
12.	Presidential Digital Talent program	Focused on Skill development, on-the-job coaching, mentorship, training, certification and ICT innovations.	Kibet Ronald, Presidential Digital Talent Programme +254 20 2211960/61 pdt@ict.go.ke
13.	Ajira Digital	Focuses on empowering over one million young people to access digital job opportunities.	Dr. Ehud Gachugu Project Director +254204920000/1 ajira@ict.go.ke
14.	National Environment Management Authority (NEMA)	Safeguard and enhance the environment through coordination, research, facilitation and enforcement while encouraging responsible individual, corporate and collective participation towards sustainable development.	Boru Mamo Director General Eland House, Popo Road, off Mombasa Road P.O.BOX: 67839-00200, Nairobi, Kenya +254 725746493 dgnema@nema.go.ke boru_mamo@yahoo.com
15.	National Biosafety Authority (NBA)	To ensure and assure safe development, transfer, handling and use of genetically modified organisms.	Dr. Roy Mugiira Chief Executive Officer +254713854132 info@biosafetykenya.go.ke www.biosafetykenya.go.ke
Research Institutions			
16.	Kenya Industrial Research and Development Institute (KIRDI)	Undertakes research, development and innovation in industrial and allied technologies and advises the government on all aspects of industrial research, innovation, development, technology and policy.	Dr.-Ing. Calvin Onyango Director-General +254 20 23 88 216 / 23 93 466 dir@kirdi.go.ke
17.	Kenya Institute for Public Policy Research and Analysis (KIPPRA)	KIPPRA's mandate is to improve public policy making for realization of national development goals, through economic forecasting, policy analysis and research, and formulation of medium and long-term strategic perspectives for economic and social development.	Dr Rose Ngugi Executive Director 0724256078 admin@kippra.or.ke
18.	Kenya National Bureau of Statistics (KNBS)	Provides, manage and promote quality statistical services through utilization of best practices for evidence-based decision making	Macdonald George Obudho Director General +254-735-004-401/+254-202-911-000/+254-202-911-001 directorgeneral@knbs.or.ke
19.	Kenya Institute of Nuclear Science and Technology (KINEST)	This research institute conducts research and provides training in the areas of nuclear science and technology, including in the fields of health, agriculture, and environment.	Prof. Michel James Gatari Gichuru Director KINEST 254 (020) 4913523 inst@uonbi.ac.ke

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20.	Strathmore University @iLabAfrica	The centre spearheads Research and Innovation in Information Communication Technology for the Development (ICT4D) of ecosystems towards the attainment of the United Nations SDGs and to contribute toward Kenya's Vision 2030. The research centre is involved in interdisciplinary research, students' engagement, and collaboration with government, industry and other funding agencies.	Emmanuel Kweyu Deputy Director +254722679154 ekweyu@strathmore.edu
21.	University of Nairobi @C4D lab	Generate and share knowledge and produce innovative technological solutions that address societal problems by nurturing and mentoring a community of researchers, undertaking cutting-edge research and forging partnerships.	Dr. Tonny Omwansa Director Nairobi @C4D lab +254 790 413 836 tomwansa@gmail.com hello@c4dlab.ac.ke
22.	USIU- Africa@Innovation incubation centre	Provides entrepreneurship training, advisement, mentoring, linkages, and workspace for student and alumni-run ventures. Selected business ideas are incubated for 12 months to develop the idea and to better position it for a successful launch.	Prof. Scott Bellows Incubation and Innovation Center Chair +254 730 116 000 /290 /291 admit@usiu.ac.ke
23.	The Catholic University of East Africa @IBM	Focuses on the application of Big Data to Africa's grand challenges in the areas of Energy, Health, Water, Education and Genomics.	Directorate of Research, Innovation & Graduate Training, P. O. Box 62157 – 00200 Nairobi, Kenya. research@cuea.edu
24.	Egerton University @Agro Park	Focuses on fostering the intensified application of STI in agro value chain development.	Prof Paul Kimurto Director of @ Agro Park +254725309162 agrosience.park@egerton.ac.ke egertonseedunit@yahoo.com , pkimurto@egerton.ac.ke
25.	Technical University of Kenya @Technology Transfer Unit	Focuses on teaching Entrepreneurship Development to all the students of the University College.	Dr. Jane G. Mpathia Director Centre for Entrepreneurship Innovation and Technology Transfer +254(20)343672,2251300 principal@kenpoly.ac.ke
26.	Kenyatta University @Chandaria business innovation and incubation centre	Fosters the culture of innovation and entrepreneurship in Kenyatta University through the establishment of innovation and entrepreneurship programmes that have strong links with industry. The Directorate also works to enhance coordination of R&D agendas and avoid duplications, stimulate additional private R&D investments, and exploit synergies and complementarities of scientific and technological capabilities.	Directorate of Innovation Incubation and University-Industry Linkages Kenyatta University 2nd Floor, Chandaria Innovation Centre Building Kenya Drive, Next to KU Main Gate director-iiuil@ku.ac.ke +254 700 363 741/ +254 020 8703870
27.	Nairobi Design Thinking School	Supports successful development of start-up companies through the provision of resources and services, which the start-up companies do not have.	Tosh Juma Managing Director +254 790 413 836 hello@c4dlab.ac.ke
28.	Kenya Agricultural and Livestock Research	Conducts agricultural research through the application of science, technology and innovation to catalyse sustainable growth and	Kaptagat Rd, Loresho, P. O. Box 57811, 00200, City Square, Nairobi, Kenya info@kalro.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
	Organization (KALRO)	development in agriculture and livestock product value chains.	+254 722 206986, +254 722 206988, +254 730 707000
29.	Sustainable Materials Research and Technology Centre (SMARTEC)	Conducts research, create innovations, and train next generation researchers and scholars in the area of sustainable construction and settlement.	Dr (Eng) CK Kabubo Tel. 0722825927 kabcha@jkuat.ac.ke Director Sustainable Materials Research & Technology Centre (SMARTEC) Jomo Kenyatta University of Agriculture and Technology P.O. Box 62000-00200, Nairobi +254722825927/020-2699755
30.	Riara University	Provides a holistic education to enable each student to realize their full potential and to develop social and moral values which will underpin their actions through life.	Prof. Robert Gateru Vice Chancellor Riara University, P.O Box 49940 – 00100, Nairobi +254703 038 000 info@riarauniversity.ac.ke/ rgateru@riarauniversity.ac.ke
31.	Multi-media University	Provides quality training, nurture a culture of research, innovation and extension to meet the aspirations of a dynamic society.	P.O BOX 15653- 00503 Nairobi, Kenya 020 7252000 info@mmu.ac.ke
32.	Technical University of Kenya (TUK)	Provides technological education and training and to contribute towards the advancement of society through research and innovation	Prof. Francis Aduol P.O. Box 52428 - 00200, Haile Selassie Avenue, Nairobi, Kenya vc@tukenya.ac.ke
33.	Kenya Forestry Research Institute (KEFRI)	This research institute conducts research on forests, forest products, and associated ecosystems, including in the areas of conservation, management, and utilization.	Dr. Joshua K. Cheboiwo director@kefri.org
34.	International Livestock Research Institute (ILRI)	This research institute conducts research on livestock and pastoral systems, including in the areas of animal health, genetics, and nutrition.	P. O. Box 30709 Nairobi 00100, Kenya +254-20 422 3000 +254-20 422 3001 ILRI-Kenya@cgiar.org
35.	Kenya Marine and Fisheries Research Institute (KMFRI)	This research institute conducts research on marine and freshwater resources, including in the areas of fisheries, aquaculture, and oceanography.	Prof. James Njiru Chief Executive Officer P.O. Box 81651 - 80100 Mombasa, KENYA +254 (20) 8021561 or 712003853 director@kmfri.go.ke
36.	International Centre for Insect Physiology and Ecology (ICIPE)	Help alleviate poverty, ensure food security and improve the overall health status of peoples of the tropics, by developing and extending management tools and strategies for harmful and useful arthropods, while preserving the natural resource base through research and capacity building.	P.O. Box 30772-00100 Nairobi, Kenya +254-20-8632000 icipe@icipe.org
37.	Kenya Water Institute (KEWI)	Offers Competency-Based Training, Research, Innovation, Consultancy and Outreach Services in the Water, Sanitation and Irrigation Sector for sustainable development.	Mr. Kennedy Riaga P.O BOX 60013-00200 Nairobi +254722 207757

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38.	Women Educational Researchers of Kenya	Contributing to knowledge generation and utilization through linking research to advocacy and action for a humane, equitable and prosperous society.	1171 Argwings Kodhek, Opposite Engen Petrol Station, Argwings Kodhek Rd +254 722 888 919, 073288819 werk@werk.co.ke
39.	African Centre for Technology Studies (ACTS)	Strengthen the capacity and policies of African countries and institutions to harness science, technology and innovation for sustainable development.	ICIPE Duduville Campus, Kasarani. P.O. Box 45917 - 00100 Nairobi, Kenya. +254710607210 +254737916566 info@acts-net.org
40.	Local Development Research Institute	Work with African governments to support their efforts in taking practical evidence-informed actions to end hunger, poverty and inequality.	Wing B, 13th Floor, One Padmore Place George Padmore Road, Nairobi Kenya. +254 718 610298 thinking@developlocal.org
41.	Pwani University Bioscience Research Centre	Carries out high quality bioscience research that informs the development of interventions against the factors causing under-development in Kenya and especially the coast region and provides high quality training for the next generation of bioscience research leaders.	Prof. Suhaila Hashim P.O Box 195-80108 Kilifi County, Kenya +254 725 91 61 45 pubrec@pu.ac.ke
42.	Jaramogi Oginga Odinga University of Science and Technology (JOUST)	To provide quality university education that nurtures creativity and innovation through integrated training, research and community outreach.	Prof. Stephen G. Agong' +254722-760-538 sgagong@jooust.ac.ke
43.	Masinde Muliro University of Science and Technology	Provides excellent university education, training and research through integrating science, technology and innovation into quality programmes to suit the needs of a dynamic world.	Prof. Solomon Igosangwa Shibairo P.O. Box 190-50100 Kakamega, KENYA Office no: ABA Kakamega-Webuye Road vc@mmust.ac.ke sshibairo@mmust.ac.ke
Non-Governmental Organizations (NGOs)/ Civil Society Organizations (CSOs)			
44.	Kenya Climate Innovation Centre (KCIC)	Offers incubation, capacity building and financing options to new, small and medium business ventures and Kenyan entrepreneurs that are developing innovations to address the challenges of climate change. They also provide holistic and country-driven support to accelerate the development, deployment and transfer of locally relevant climate technologies.	Ernest Chitechi Corporate Services Manager +254722108068 echitechi@kenyacic.org
45.	STEM Impact center Kenya	Works to advance science, technology, engineering, and mathematics (STEM) education and learning, with the goal of increasing the number of students, especially women and minorities, pursuing science and technology innovations, courses and career pathways.	Eric Nyamwaro Director +254 729 980 718 director@stemimpactcenterkenya.org
46.	The United Nations Educational, Scientific and Cultural	contribute to the building of a culture of peace, the eradication of poverty, sustainable development and intercultural dialogue	National Bank Building, Harambee Avenue, 16th Floor, P. O. Box 72107-00200 Nairobi Kenya. +254-202229053

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
	Organization (UNESCO)	through education, the sciences, culture, communication and information.	sg@unesco.go.ke
47.	Global E -Schools and Communities Initiatives (GESCI) Kenya	Work with governments and partners in providing strategic support to develop and implement models of good ICT-based practice for high-quality education and training.	Unga House, 9th Floor Muthithi Rd, Nairobi +254 20 3746061
48.	The International Service for the Acquisition of Agri-biotech Applications (ISSA-Africentre)	Shares the benefits of new bioscience technologies to key stakeholders, particularly resource-poor farmers in developing countries, through knowledge sharing, support to capacity building initiatives, and partnerships.	ISAAA AfriCenter ILRI Campus, Old Naivasha Rd. P.O Box 70-00605 Nairobi, Kenya +254-20-4223618 africenter@isaaa.org
49.	CORAT Africa	Provide professional non-academic training with the goal of improving the human capital capacity of organizations, churches and church-related organizations, civil society organizations, and so on, in order to build organizations that are efficient, effective, results-oriented, and fit for purpose.	Dr. Oliver Kisaka +254 724-569660
50.	CFK Africa	Works with community members to improve public health, educational outcomes, and economic opportunities in informal settlements.	Hillary Omala +254 (0)20 2350 161 hillary.omala@cfkafrica.org
51.	ASHOKA	Shapes a regional, entrepreneurial, and competitive citizen sector, one that allows entrepreneurs to thrive and enables the region's citizens to think and act as Changemakers.	Vincent Odhiambo Regional Director, Ashoka East Africa voodhiambo@ashoka.org
52.	Centre for Agriculture and Bioscience International (CABI)	Improve people's lives by providing information and applying expertise to solve problems in agriculture and the environment.	Morris Akiri Senior Regional Director, Canary Bird, 673 Limuru Road, Muthaiga, PO Box 633-00621, Nairobi, Kenya +254 20 2271000 africa@cabi.org
53.	Safaricom Foundation	Focuses on enabling Kenyans to access quality healthcare, education, skills and sustainable employment.	TheFoundation@Safaricom.co.ke +254792989398.
54.	Centre for Health Solutions in Kenya	Optimises the delivery and use of health interventions to communities through evidence-informed solutions, innovation, and research to address existing and emerging public health needs.	CVS Plaza, 4th Floor, Kasuku Road, off Lenana Road, Kasuku Rd, P. O. Box 23248 – 00100, Nairobi. info@chskkenya.org +254 (0) 724 71 0077 +254 (0) 732 71 0079
55.	Equity Group Foundation	Support top performing students from financially challenged backgrounds to get secondary education. With support from other partners, the program offers access to leadership training to previously marginalized children in all counties.	9th Floor, Equity Centre, Hospital Road, Upper Hill. Nairobi, Kenya. info@equitygroupfoundation.com
56.	Media for Environment, Science, Health and Agriculture in Kenya (MESHA)	Promote the development of agriculture and environmental communication through an interactive and holistic approach that involves journalists and other stakeholders in improving science journalism in Kenya and the region.	Oasis Apartments, Jogoo Road,3rd Floor. P.O. Box 2428,0202 Nairobi, Kenya.
57.	Science for Africa Foundation (SFA)	Strengthen African science for a better future in a global world.	Riverside Drive Chiromo Lane, Nairobi,

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
			Kenya P.O. Box 50877-00100, Nairobi, Kenya +254 705 199 199 info@scienceforafrica.foundation
58.	The Association of Visual Artists and Collectives (AVAC)	Educates and provide opportunities for visual artists and or visual artists organizations/collectives through coordinating residency program options, master class training and other education-related platforms.	Syowia Kyambi +254 720 305 378. post@syowiakyambi.com
59.	Permanent Presidential Music Commission	Promotes the development and practice of music and dance; spearhead the growth and development of the music industry contribute to the understanding and preservation of Kenyan musical arts and expressions	Dr. Donald Otoyoy Director Permanent Presidential Music Commission info@ppmc.go.ke
60.	The Kenya Association of Music Producers (KAMP)	Improves the economic empowerment of stakeholders in music industry and protection of the commercial use of their works.	Maurice Mwande Okoth P.O Box 51149-00200, City Square, Nairobi +254 738 645 041, +254 710 309 695 info@kamp.or.ke , marketing@kamp.or.ke inquiries@kamp.or.ke
61.	HEVA Fund	Invests in creative businesses and projects, and directly supports creative practitioners in the fashion, digital content and television, live music and gaming value-chains.	Wakiuru Njuguna Managing Partner +254 (20) 4400 870
62.	Limuru Girls Centre	Train's secondary school leavers from needy background in useful craft skills	Njathaini Rd off Kiambu/Nairobi Rd +254 20 - 8564916 +254- 20 - 8564916
63.	Kenya Water for Health Organization	Supports and promote the government's efforts of realizing water for everyone through mobilizing local governmental organization and communities for self-reliant actions toward this end.	Patrick Alubbe Executive Director (254) 020 804 2215 / 020 655 7550 info@kwaho.org
64.	Technoserve Kenya	To help entrepreneurial men and women in poor and marginalized areas in Kenya by empowering them to build businesses that create income, opportunity and economic growth for their families, communities and country.	Kris Ansin Country Director, Kenya P.O. Box 14821, 00800 Westlands (254) 20 - 3754333
65.	Caritas Italiana	Promotion of human and social development by offering services and financial support to groups and movements.	His Lordship Bishop David Kamau, 7th Floor Cardinal Otunga Plaza, Kaunda Street, Nairobi, KENYA. P.O Box 41353-00100. +254 20 4950000 +254 720 361 855 communication@caritasnairobi.org
66.	Help Self Help Centre	Formulates strategy for the further development of the methods of participatory approach in collaboration with other development agencies.	Mr. Bernard Muchiri Director +25472000-5717 info@hshc.or.ke
67.	Africa Rehabilitation and Education Program	Promotes the Education of Refugees for Self-reliance.	Lower Hill Rd, Multichoice Tw's, 3rd, Nairobi, Kenya P.O. Box 67391-00200 (254) 20 – 2727744

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68.	African Council for Communication Education	Enhances Training, Research, Publication and Documentation in communication in Africa Countries	University Of Nairobi, Main Administration Block, 1st Floor, P.O Box 47495, Nairobi, Kenya +254-20 2215270
69.	African Refugee Training and Employment Service	Advances training for the relief of poverty and distress of the residents of Kenya i.e. Refugee	Windsor House Second Floor +254202217509
70.	Christian Mission Aid	Provides technical assistance, advice, material and financial aid to rural community groups and missions.	Nachu Plaza, Kiambere Road, Upper Hill P.O. Box, 57351 – 00200, Nairobi, Kenya
71.	Kenya Voluntary Development Association	Mobilizes all-purpose resources to support grassroots development.	Kwarara Road, Karen, Nairobi, P.O. Box 48902-00100 Nairobi-Kenya +254-721650357 info@kvdakenya.org
72.	Population Council	Applies science and technology to the solution of population problems in developing countries	Beth Kangwana Avenue 5, 3rd Floor. Rose Avenue, Nairobi +254 20 2713 480 info-nairobi@popcouncil.org
73.	Windle International -Kenya	Creates lasting change and transformation in society by delivering quality education and training, advocating for, and influencing, education policy for refugees, the needy and conflict-affected communities in Eastern and Central Africa	Amboseli No# 10, Off Gitanga Road +254 721 551 451 windle@windle.org
74.	Ambassadors Development Agency	Assist people in Africa and specifically in Kenya to blend more effectively in social economic activities through identifying themselves with the needs and development in their communities and social groups.	Enterprise Rd, KCB Bldg, 5th, Nairobi, Kenya P. O. Box 44814, 00100 (254) 20 - 551151
75.	Africa Alliance of YMCAs	Equips National Movements in empowering young African men and women with voice, space and ability to influence for the holistic transformation of their communities, nation and the African continent.	Isaac Oindo Programme Management Officer +254726084725 ioindo@ywcakenya.org aaymcas@africaymca.org
76.	Sustainable Agriculture Community Development Program	Train farmers in Agriculture - Technical support to institutions, support farmers marketing of organic farm products.	P.O. Box 1134 – 01000 Thika, Kenya +254 703 441614 sacdepkenya@iconnect.co.ke , info@sacdepkenya.org
77.	Green Africa Society	Giving people chances to engage in positive, creative and productive activities using existing resources in order to improve their livelihood.	P.O. Box 9164 - 00200 Nairobi, Kenya +254 707 111 999 info@greenafricafoundation.org
78.	Green Belt Movement	Inspire and empower communities promote and practice sustainable development. Trains youth and supports generation of green jobs.	Adams Arcade, Kilimani Road off Elgeyo Marakwet Rd, P.O BOX 67545-00200, Nairobi, Kenya +254 (20) 3873057 / (20) 3860158 / (20) 3860157/+254 (0) 721342696 gbm@greenbeltmovement.org

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79.	Kenya Christian Industrial Training Institute (KCITI)	Provide advanced technical training and health care to people at low cost and in a Christian atmosphere.	Eastleigh 2nd Avenue 5th St, P.O. Box 71083-00622, Nairobi Kenya +254 728 607 779 admissions@kciti.edu
80.	Muslim Women Association	Adopts all possible means for educational, social, economic, religious, domestic, moral and cultural uplift and advancement of Muslim women of Kenya irrespective of sect or colour.	Zainab Salim Oshaan Chief Executive Officer +254722412130 info@kemwa.org
81.	Rural Initiative for Sustainable Development	Promote development of rural areas through rural initiatives thereby reducing rural urban migration in search of employment by facilitating education training for greater capability of rural people solving their own problems	P.O Box 266-40100 Ahero, Kenya +254721917461 sec@srikenya.org
82.	Kenya Gatsby Trust	Give assistance to small scale and micro-entrepreneurs in the areas of training, research, technology, transfer and credit	Samuel Kareithi, Country Director – Kenya. P.O. Box 44817-00100 (254) 20 - 2720711
83.	AVSI- International Service Volunteers Association	Train volunteers, on both a human and professional level, to co-operate in the social and economic growth of the developing countries	Nairobi HQ Office St. Kizito Building Off Thika Rd, Exit 8 Nairobi, Kenya +254 721 537 657 nairobi@avsi.org
84.	African Regional Centre for Computing	Promotes excellence in computing and communication Technologies and to enhance their utilization	P.O Box 58638-00505 020-2723552
85.	Entrepreneurship Development Centre	Promote adoption and use of computer and related equipment in and public institutions, promote entrepreneurship development in scale industries through training and consultancy	First Floor Westlands Arcade P O Box 14183-00800 Nairobi, Kenya +254 735 497075 or +254 717 555 858 info@edc-incubation.com
86.	Wajir South Development Association (WASDA)	Strengthens, train, support and enhance community development in areas of literacy, education, primary health care, income generating activities and Agricultural activities	P.O. Box 28409 - 00200, Nairobi. +254 732 333301 info@wasda.or.ke
87.	Sight Savers International (Royal Commonwealth Society for The Blind)	Provision of funds and technical assistance to build indigenous capacity in the areas of prevention and cure of blindness and education and rehabilitation of the incurably blind and visually impaired persons.	P.O. Box 34690, 00100 (254) 20 - 350995
88.	International Relief Friendship Foundation	Promote better living conditions to bring development in both rural and urban communities. To sponsor programmes in agriculture, education, technical training relief.	Chiromo Rd, Waumini Hse, Ground Flr, Westlands Plot 187 +254 20 448668
89.	Kenya Institute of Social Work	Trains qualified Community Development Workers to assist the community in project planning and management. This is done to ensure that Communities are self-reliant in small-scale business entrepreneurship, income generating activities, food security, public health care, water and sanitation, improved shelter, and environment.	Nancy Cheruto P.O. Box 57961 00200 Nairobi +254 734 201972, +254 724 772878 info@kiswcd.co.ke

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90.	Julikei International Women and Youth Affairs	Strengthen the capacity of women and youth in areas of water, relief, education, healthcare, population, environment, poverty reduction and welfare of people in Kenya.	Julie Kemunto Maranya Director, +254 2715134
91.	Resource Oriented Development Initiatives	Promotes food security using organic agriculture techniques	The Executive Director, RODI P.O Box 746-00232 Ruiru- Kenya (+254) 743 627 329 rodikenya@iconnect.co.ke
92.	Development Education Services for Community Empowerment (DESECE)	Promotion of sustainable Agriculture and Rural Development in Western Kenya.	Sophie Kibuywa P.O. Box 29-50207, Misikhu, Kenya +254 0722 420723, 0733 683298 desece2006@africaonline.co.ke
93.	Sustainable Agriculture Centre for Research and Development in Africa (SACRED-Africa)	Research, Develop and Disseminate improved Soil fertility, Marketing and Seed technologies. Facilitates and supports smallholders' value addition and marketing.	Eusebius Mukhwana P.O. Box 8771-00200, Nairobi + 254 020 2730709 sacred@africaonline.co.ke
94.	Organic Agriculture Center of Kenya (OACK)	Training farmers and disseminating information related to ecological farming	David Gathuka +25472513-5150 d.gathuka@yahoo.com
95.	Youth Action for Rural Development (YARD)	Training of farmers on ecological production, processing and value addition, preservation and marketing of indigenous foods	Sebastian Wambugu P.O. Box 4781-01002, Thika 020 2020786/ 0202153644 yardcommunitydev@yahoo.com info@yardcommunity.org www.yardcommunity.org
96.	Mount Kenya Organic Farming (MOOF)	Promotes organic farming, act as a resource centre, research novel methods, and ultimately provide training.	Peter Murage P.O. Box 1053- 10400, Nanyuki 061 2031187 moofafrica@todays.co.ke
97.	Wild Living Resources	Promotes participatory involvement, community capacity building, training and certifies local farmers on sustainable land use and sound environment management	Anthony Njiru Maina Mombasa-Kilifi Road, P.O. Box 974 - 80108, Kilifi +254728 608618, 736 484317, (020) 233 0538 info@wildliving.com www.wildliving.com
Private Sector			
98.	Kenya Manufacturers Association (KAM)	Key players in driving fact-based policy advocacy towards the formation of industrial policies to strengthen and support the country's economic development.	15 Mwanzi Road opp West Gate Mall, Westlands, Nairobi, Kenya +254 (0) 722201368, 734646004/5 info@kam.co.ke
99.	Kenya Private Sector Alliance (KEPSA)	Supports businesses with opportunities for training, networking, financial linkages, mentorships & coaching, access to markets, value chains and investment opportunities while working closely with many partners from across the world.	5th Floor, Shelter Afrique Building, Mamlaka Rd. P. O. Box 3556-00100 Nairobi, Kenya +254202730371 2 2727936 883 +254 720 340949 735 999979 info@kepsa.or.ke
100.	IHub	Focuses on accelerating the application of social capital and technology for economic prosperity.	6 th floor Senteu Plaza, Galana/Lenana Road, Nairobi, Kenya.

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
			P.O Box 22494 - 00505 Nairobi, Kenya info@ihub.co.ke +254798985410
101.	Gearbox	Focuses on imparting relevant hands-on skills through human-centred Design (HCD) and Industry 4.0 technologies, to promote digital literacy in engineering fields.	Avon Centre, Industrial Area, Enterprise Road, Nairobi Kenya. P. O. Box 58275-00200 Nairobi. (+254)790406265 info@gearbox.co.ke https://www.gearbox.co.ke/
102.	88 mph	Seed fund venture that invests in early-stage mobile-web companies targeting the African market.	Nairobi Garage 88mph, Nairobi 4th Floor, Piedmont Plaza 671 Ngong Road Nairobi, Kenya team@88mph.ac
103.	Metta	Creates collaborative environments that help corporates create tangible commercial outcomes, startups expedite the pathway to commercialization and attract quality deal flow with de-risked investments for investors.	Belgravia Building/ 6F, 14 Riverside Dr, Nairobi-KE +254-706-648-544 nairobi@metta.co
104.	ilab Africa	Spearheads Research and Innovation in Information Communication Technology for the Development of ecosystems towards the attainment of the United Nations SDGs and to contribute toward Kenya's Vision 2030.	Strath-more University, 4 th Floor Student Centre Building, Keri Road, Madaraka Estate, P.O Box 59857,00200, Nairobi. +254 703 034616/ 0703 034 617 ilabafrika@strathmore.edu www.ilabafrika.ac.ke
105.	Mashinani Hub	They are an innovation centre that is focused on social impact, job creation, and innovation through facilitating business development, incubation services and marketplace to the local community through inspiring, creating, and connecting the next generation of entrepreneurs in Africa.	CWRJ+CW2, Nyamira behind Huduma Center hello@mashinanihub.co +254727 264748
106.	EldoHub	Focuses on providing STEM education, job matching and digital work while running entrepreneurship development programs, as well as incubating startups to bring their ideas to life.	Kiptagich House, 6th Floor, Eldoret. info@eldohub.co.ke (+254) 112-006-932
107.	Moringa School	Committed to closing the skills gap in Africa's job markets by delivering transformative tech-based learning to high-potential jobseekers; and on graduation connecting them to local and international employers who desire high-quality tech talent.	Ngong Lane, Ngong Lane Plaza, 1st Floor, Nairobi P.O Box 28860 - 00100, Nairobi contact@moringaschool.com +254 712 293 878
108.	Akirachix	Provide the most promising young women in Africa, with technology and entrepreneurial skills to compete economically and bridge the gender gap in tech.	Linda Kamau. Managing Director P.O. Box- 22009-00100 Nairobi. info@akirachix.com
109.	Sinapis (Youth Business International, YBI)	Teach entrepreneurs how to scale their businesses while also making a social & spiritual impact in their community.	Sinapis Centre, Junction of Wood Avenue & Lenana Road, Kilimani, Nairobi. +254 757 409 511

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
			info@sinapis.org
110.	Cytonn College of Innovation and Entrepreneurship	Offers diploma, certificate and short professional courses with a focus on entrepreneurship and technology. The courses are designed to equip students with technical, entrepreneurial and soft skills that will ensure their suitability for the opportunities in the job market and provide them with the skills and knowledge that will enable them to build and run successful businesses.	Benjamin Ikenye Business Manager- Cytonn Education Services +254 772 351 191 somoguide@gmail.com
111.	Microsoft 4Africa	Aims to empower Africans to create locally relevant solutions, create new digital skills and upskill or reskill existing skills in the marketplace, and provide the tools to expand existing markets and create new markets.	Amrote Abdella Regional Director, a4afrika@microsoft.com
112.	IBM Research Africa	IBM's research facility in Kenya conducts research in areas such as artificial intelligence, cloud computing, and internet of things.	P. O Box 35475 00200 Nairobi, Kenya +254 20 515 3000
113.	Kenyatta University's Innovation and Incubation Center	This center is focused on promoting innovation and entrepreneurship in Kenya and supports start-ups with incubation and mentorship services.	Dr. Maina Mwangi Director, +254 700 363 741 director-iiuil@ku.ac.ke
114.	Nairobi Garage	This private sector organization works to promote technology innovation and entrepreneurship in Kenya, specifically in areas such as software development, digital marketing, and e-commerce.	Hannah Clifford Director +254 755 556 955 karen@nairobigarage.com
115.	mLab East Africa	This private sector organization works to promote technology innovation and entrepreneurship in Kenya, specifically in the area of mobile technology.	Eric Muthaura Koronya P.O. Box: 58275-00200 +254 203636203 info@mlab.co.ke
116.	The BOMA Project	This private sector organization works to promote innovation and entrepreneurship in Kenya, specifically in the area of sustainable energy solutions for rural communities.	Sam Owili Program Director P.O Box 48932- 00100, Nairobi +254 (0)20 800 9959 info@bomaproject.org
117.	The Nailab	This private sector organization works to promote innovation and entrepreneurship in Kenya, specifically in the areas of technology, creative industries, and business innovation.	Sam Gichuru +254790492467 ceo@nailab.co.ke
118.	Centre for Enterprise Development and Innovation (CEDI)	Leverage on innovation and entrepreneurship to alleviate extreme poverty	Nixon Oleche. Chief Executive Officer, P.O Box 16819-00100. Nairobi Kenya +254 207 850 555/ +254 737 185 469 info@cedinnov.org
119.	SBC Network	Offers consultancy and counseling services to small businesses and provide need-based training for the same target group	Mr. G. S. Namusonge P.O. Box 62000 Nairobi, Kenya +254 151 22646
120.	Youth Talent & Enterprise Development Centre (YTEDC)	Works with youth across Africa with a view to creating a productive generation for a prosperous Africa. The Company's primary focus is training, capacity building, social mobilization	Hurlingham Park B8. Arwings kodhek rd, Nairobi-Kenya. +254 728 798 590/ +254 718 266 461

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
		in areas that contribute to socioeconomic empowerment of youth.	
121.	The Organic Farmer (TOF)	It is an independent magazine for Kenyan small-scale farmers. Provides practical information on ecological farming and sustainable practices	Peter Kamau ICIPE Complex, P.O. Box 14352-00800, Nairobi +254 020 4450398 info@organickenya.com www.icipe.org
122.	Afrika Youth Space	A safe space features great initiatives that youths are taking part in. Encourages youths to send their initiatives so that they showcase them as they tackle those challenges together.	Emmanuel Mwakwera Amref Health Africa, Wilson Airport, Nairobi, Kenya +254 20 699 4000
	Media		
123.	Nation Media Group	Creates value for our stakeholders and positively influence society by providing media that informs, educates, and entertains.	Stephen Gitagama Chief Executive Officer, P. O Box 49010-00100, Nairobi, Kenya Sgitagama@ke.nationmedia.com
124.	Radio Africa Group	Improve everyone's life through disruptive products.	Martin Khafafa Group Chief Operating Officer +254 20 42444200 info@radioafricagroup.co.ke
125.	Standard Group	Disseminate media content that provides a voice to society	Charles Kimathi, Head of Corporate Affairs, P.O Box 30080-00100, Nairobi, Kenya. +254796895599 ckimathi@standardmedia.co.ke
126.	Royal Media Services	Creates, collaborates, innovates, and shares information	Wachira Waruru Group Managing Director P.O. Box 7468 – 00300 Nairobi, Kenya wachira.waruru@royalmedia.co.ke
127.	Multi choice (DSTV)	Entertain, inform and empower African communities that inspire and build us in return.	P.O. Box 60406, 00200, Nairobi, Kenya mchoice@ke.multichoice.com +254 711 066 000
128.	Kenya Broadcasting Corporation	To provide leadership in transmission of objective, informative, educative and entertaining content to the public through high quality broadcasts.	P. O Box 30456- 00100 Nairobi +254723892654/ 0734780124 feedback@kbc.co.ke

d) Nigeria Stakeholders

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
	Government		
1.	Federal Ministry of Science, Technology and Innovation (FMSTI)	To facilitate the development and deployment of Science and Technology apparatus to hasten the pace of socio-economic development of the country.	Mr. Sunday Edet Akpan. +234) 7081113678, (+234) 8092223678, (+234) 9055553678, (+234) 8140000278. info@scienceandtech.gov.ng Head of Department Renewable and Conventional Energy Technology: Mr. Isah Buda- drcet@scienceandtech.gov.ng Oseni A.S- a.oseni@scienceandtech.gov.ng
2.	Federal Ministry of Agriculture and Rural Development	Ensures food security in crop, livestock and fisheries, stimulate agricultural employment and services, promotes the production and supply of raw materials to agro industries, provide markets for the products of the industrial sector, generates foreign exchange and aid rural socio-economic development”	Kapital Road, Area 11, Abuja Nigeria www.fnard.gov.ng
3.	Federal Ministry of Mines and Steel Development	Ministry of mines and Development has on few occasions collaborated with the African Association of Women in Geosciences in the area of visiting some mining areas for educational value and capacity building.	2, Luanda, Off Adetokunbo Ademola Cres, Wuse II 900271, Abuja. Contact-095239024
4.	Federal Ministry of Environment	Ministry of Environment in collaboration with stakeholders have held conferences for educational purposes and capacity building, visit to geopark site, visit to various areas with mineral resources e.g., of such areas is Awe in Nasarawa state of Nigeria where salt is found	Mabushi 900108 Abuja. Contact -08033147629
5.	Federal Ministry of Health	Develops and implements policies that strengthen the national health system for effective, efficient, accessible and affordable delivery of health services in partnership with other stakeholders.	Federal Secretariat Complex, Phase III, Shehu Shagari Way, Central Business District, Abuja info@health.gov.ng https://health.gov.ng
6.	Federal Ministry of Education Abuja	Ministry of Education: 1) They are involved in the interactions among enterprises; 2) interactions between universities and public research laboratories; 3) diffusion of knowledge and technology to firms; and 4) movement of personnel.	Phase III, FCT, Abuja. Nigeria Zip Code Tel, +234903000912, +2340930009913
7.	Federal Ministry of Power	It is the policy making arm of the Federal Government with the responsibility for the provision of power in the country. The Ministry in discharging this mandate is guided by the provisions of the National Electric Power Policy (NEPP) of 2001, the Electric Power Sector Reform (EPSR) Act of 2005, and the Roadmap for Power Sector Reform of August 2010.	Power House, Plot 14, Zambezi Crescent, Maitama, Abuja. info@power.gov.ng https://www.power.gov.ng

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
8.	Federal Ministry of Works and Housing	To elevate Nigerian roads to a standard of veritable national economic assets and tools for national integration, rapid economic growth and national development (Works), as well as to provide access to home ownership and rental schemes to the Nigerian populace (Housing).	Federal Ministry of Works and Housing Headquarters, Mabushi, Abuja. info@worksandhousing.gov.ng https://worksandhousing.gov.ng 234-(0)- 9 122 0581 61
9.	Federal Ministry of Communications and Digital Economy	Creates a robust digital economy that enhances security, increases transparency, and diversifies the Nigerian economy.	Federal Ministry of Communications and Digital Economy (P.M.B. 12578) Federal Secretariat Complex Phase I, Annex III, Shehu Shagari Way Abuja FCT Nigeria info@fmcde.gov.ng www.fmcde.gov.ng
10.	National Research and Innovation Council (NRIC)	Comprises the President and Federal Ministers from sectoral ministries with connections to STI, NRIC is mandated to set national priorities on research and development and set and coordinate STI activities in line with national priorities. The NRIC is also responsible for the establishment of new research institutes and the strengthening of existing ones. NRIC facilitates fundraising activities to support innovation activities in alignment with national priorities.	
11.	National Council on Science, Technology and Innovation (NCSTI)	sets broad directions to coordinate STI activities in line with national priorities, monitors the activity of public STI agencies and is responsible for the dissemination of outputs from scientific research.	
12.	State Science, Technology and Innovation Council (SSTIC)	provides leadership and direction for STI activity at a state level, promotes science education and disseminates STI information, aligns policies and programmes with those of the NRIC, and promotes and implements decisions and programmes of NCSTI.	
13.	Bank of Agriculture	The Bank provides credits for Micro, Small, Medium and Large Enterprises (MSMLE) for Agriculture value chain activities.	162 Independence Ave, Central Business Dis 900103, Abuja info@boanig.com
14.	Central Bank of Nigeria	The CBN, through its anchor borrowers programme, provides a single-digit loan to boost the agricultural sector of the economy. It creates an economic linkage between small holder famers and agro-processors, etc.	Plot 33, Abubakar Tafawa Balewa Way Central Business District, Abuja contactcbn@cbn.gov.ng
15.	Small and Medium Enterprises Development Agency	SMEDAN serves as a vanguard for rural industrialization, poverty reduction, job creation and enhanced livelihoods. SMEDAN links micro and small-scale enterprises to internal and external sources of finance, appropriate technology, technical skills as well as to large enterprises.	35 Port Harcourt Crescent, Off Gimbiya Street, Area 11, Garki Abuja info@smedan.gov.ng
16.	National Institute of Leather Science and Technology (NILEST)	NILEST: To produce technologists and technicians with training for the production of leather and leather product and other scientific products.	3 Leather Research Road, Zaria

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
17.	National University Commission	National University Commission approves all academic programmes in Nigerian universities and the grants for establishment of all higher educational institutions offering degree programmes in Nigerian universities. They ensure quality assurance of all academic programmes offered in Nigerian universities.	Plot 26A Aguiyi Ironsi Street, Maitama, Nigeria +234 803 314 5014 okonogbo@yahoo.com anthony.adejumo@gmail.com http://www.nuc.edu.ng
18.	National Board for Technology Incubation (NBTI)	NBTI is an agency of government, under the Federal Ministry of Science, Technology and Innovation, charged with the responsibility to implement technology incubation programmes in all the states of the federation. They have performed the following roles: Nurtured and grown several small businesses, products and innovations, have trained and turned entrepreneurs out of students and Have provided early support to young entrepreneurs that trained under them.	+2348136590157, info@nbt.gov.ng
19.	Federal Ministry of Women Affairs	Ministry of women affairs have also contributed through their participation in the conferences.	Annex 3, new Federal Secretariat, Shehu Shagari Way, Central Area. Contact - 23495237112
20.	Nigerian Communication Commission (NCC)	NCC: Is an Agency of government under the supervision of Federal Ministry of Communication and Digital Economy. NCC is responsible for regulation, Standardization, Development and growth of the ICT ecosystem in Nigeria innovation.	Aguiyi Ironsi Street, Maitama Abuja
21.	Raw Materials Research and Development Council (RMRDC)	RMRDC: Is an Agency of government under the supervision of Federal Ministry of Science and Technology. RMRDC is responsible for industrial raw materials growth, promotion and utilization through innovation.	17 Aguiyi Ironsi Street, Maitama ceo@rmrdc.gov.ng
22.	National Biosafety Management Agency	Regulatory agency of government on biosafety issues	Umaru Musa Yaradua Expressway, Abuja, Nigeria
23.	National Centre for Technology Management (NACETEM)	Serves as a Training Centre for the development of high-level manpower in the STI management to all tiers of government and the private sector; To conduct Policy research, evaluation and review to provide sound policy advice for dynamic technology-driven, knowledge-based development; To design and run postgraduate course/programmes in STI management in conjunction with appropriate established institution home or/and abroad; To establish, maintain and provide relevant databases on STI engagements, as well as providing access to databanks on STI research outputs to facilitate activities towards commercial exploitation; To assist the various governments (Federal, State and Local) in the country in STI policy formulation and strategies for utilising such for development and, To collaborate with other countries especially African countries in STI training, policy research and consultancy.	Off Road 1, OAU, Ife Osun State (234)08060702979, dg.ceo@nacetem.gov.ng https://www.nacetem.gov.ng/

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
24.	Tertiary Education Trust Fund (TETFund)	Provides supplementary support to all levels of public tertiary institutions with the main objective of using funding alongside project management for the rehabilitation, restoration and consolidation of Tertiary Education in Nigeria. It supports research in STI through the National Research Fund and the Institution Based Research Fund.	No.6 Zambezi Crescent, Off Aguiyi Ironsi Street, Maitama, Abuja, FCT Nigeria (+234) 814 161 8921 info@tetfund.gov.ng https://tetfund.gov.ng/
25.	National Agency for Science and Engineering Infrastructure (NASENI)	Creates an enabling knowledge-driven environment for local mass production of standard parts, goods, and services required for the nation's technology advancement, thus strengthening the STI ecosystem in Nigeria.	Idu Industrial Layout PMB 391, Garki - Abuja naseni@naseni.org +23412622049 https://naseni.gov.ng/
26.	National Centre for Agricultural Mechanization (NCAM)	NCAM's role is skilfully engaging in innovative and adaptive research leading to the design and development of efficient agricultural machinery and technologies.	Km 20 Ilorin- Lokoja Highway, Idofian, 240103, Ilorin, Kwara, Nigeria +234 803 364 9168 info@ncamng.org http://www.ncamng.org
27.	National Directorate of Employment (NDE)	The role of NDE is focused on designing and implementing programmes to combat mass unemployment; articulating policies aimed at developing work programmes with labour-intensive potentials; and obtaining and maintaining a data bank on employment and vacancies in the country to act as a clearing house to link job seekers with vacancies in collaboration with other government agencies. Their key focus areas are vocational development entrepreneurship development, agriculture skills training, and public works programs.	Plot 74, Nouakchott Street, Zone 1, P.M.B 104, Wuse, FCT, Abuja. +234 0000 000 000 info@nde.gov.ng Ufelle Ukamaka Chika Anambra State Director 08035888922; 08184764587 ndeanamprs@yahoo.com Ekah Bassey Promise Akwa-Ibom State Director, 08095695077, 07066864747 ndeanamprs@yahoo.com https://nde.gov.ng/
28.	Federal Ministry of Industry, Trade and Investment.	Their role is to provide prompt and excellent service delivery consistent with modern innovation and technology as well as raise the profile of Nigeria in the area of intellectual property protection, in a way consistent with best practices across the globe.	Block D Old Federal Secretariat Area 1, Garki, Abuja +234 803 334 8806 stellaezenduka@yahoo.com https://www.iponigeria.com/
29.	National Office for Technology Acquisition and Promotion (NOTAP)	Encouragement of a more efficient process for the identification and selection of foreign technology. Development of the negotiating skills of Nigerians to ensure the acquisition of the best contractual terms and conditions in the transfer of foreign technology agreements. Provision of a more efficient process for the adaptation of imported technology. Registration of all foreign technology transfer agreements having effect in Nigeria. Monitoring continuously of the implementation of any contract or agreement registered pursuant to the Act setting up the Office. Commercialization of R&D Results and Inventions. Promotion of locally generated technologies. Promotion of Intellectual Property. Promotion and encouragement of the development of creative and inventive skills	4 Blantyre Cres, Wuse 904101, Abuja info@notap.gov.ng +234-9034776654 https://notap.gov.ng/

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		among Nigerian Scientists, Researchers, Inventors and Innovators.	
30.	National Biotechnology Development Agency (NABDA)	Promotion, coordination, and deployment of cutting-edge biotechnology research & development, processes, and products for the socio-economic well-being of the nation. To make Biotechnology an engine of growth for the socio-economic development of Nigeria. Promoting biotechnology activities that positively respond to national aspirations on food security, job/wealth creation, affordable healthcare delivery, and sustainable environment.	Umaru Musa Ya'adua Way, Airport Rd, Lugbe, Abuja Personal contact of DG: +2348035692093; other contact +2348033549777 +2348073557759; info@ofabnigeria.com
31.	National University Commission	Approving all academic programmes run in Nigerian universities; Approving the grants for the establishment of all higher educational institutions offering degree programmes in Nigerian universities; Ensuring quality assurance of all academic programmes offered in Nigerian universities; and Channel for all external support to the Nigerian universities.	Plot 26A Aguiyi Ironsi Street, Maitama, Nigeria +234 803 314 5014 okonogbo@yahoo.com anthony.adejumo@gmail.com http://www.nuc.edu.ng/
NGOs and CSOs			
32.	Nigeria Innovation Summit Group	Nigeria Innovation Summit Group: Is a non-governmental organization that work toward promotion of innovation in all sectors of the economy. Their core area of interest is the information technology innovation	3 Lekki – Epe Express way, Victoria Island 106104, Lagos. Grace +234-812-275-4197 grace@innovationsummit.ng https://innovationsummit.ng/
33.	Rural farmers hub	It provides farmers with advisory services guided by satellite-based remote imagery. Rural Farmers Hub encourages the sustained economic development of smallholder farmers by achieving higher levels of productivity through innovative information technology	No.1473 Inner Block St, Central Business District 900211, Abuja, Federal Capital Territory https://ruralfarmershub.com/ +2340815 987 9659
34.	Association of Professional Women Engineers of Nigeria (APWEN)	APWEN: Encourages, enhances the capacity of women in Engineering profession towards national and global technological development. Their numerous programmes are aimed at tackling the dwindling education of the girl child in Science, Technology, Engineering and Mathematics (STEM) and enhancing the capacity of the collegiate and young graduate to excel in STI	Mrs Ngozi Afakwu, APWEN NSE Building, 1 Engineering Close, off Idowu Taylor Street, Victoria Island, Lagos,
35.	Angels Discovery Circle Initiative	This is a non-profit organization in Nigeria that offers humanitarian services, scholarship programs, skill acquisitions, safety awareness and rehabilitating	Block 5, Plot 8-10, Jajo Estate, Off Ijede Road, Po Box 2953, Ikorodu, Lagos. care@adcinitiative.org +234(0)8098282464 http://adcinitiative.org/
36.	Sought After Women and Children Foundation	It is a registered non-governmental organization in Nigeria dedicated to ministering to abused women and abandoned children in the society. Their activities include Rehabilitation programs, Orphanage homes and Outreaches to other NGOs and Homes. Their Services: Shelter for children,	Sought After Children Orphanage Home of Sharon (Women Rehab) No 17 Balee Close, Off Balee Street, No.14 Obatarhe Ojoboh Street, Owode Bus stop, Owode-Langbasa, Idowu Estate, Oke

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		empowering women, Saving a family and Education for children	Ira, Ajah, Lekki, Lagos Lekki, Lagos. swcf@soughtafterfoundation.org carol@soughtafterfoundation.org http://soughtafterfoundation.org/
37.	Association for Reproductive and Family Health	This is one of the leading indigenous non-governmental organizations in Nigeria committed to improving the quality of life of undeserved and vulnerable communities by promoting access to quality health care and harnessing community capacity for sustainable development.	ARFH HOUSE, Plot 815A, Army Officers' Mess Road, Near Ikolaba Grammar School, Agodi G.R.A., Ikolaba, Ibadan. P.O. Box 30259 Secretariat, Ibadan, Oyo State +234 802 354 2881 info@arfh-ng.org https://arfh-ng.org
38.	Africa Youth Growth Foundation	This is a non-governmental organization set up with the sole purpose of contributing to positive change in the economic and social status of African youth through effective programs that deliver sustainable outcomes. Their activities: Migration, Democratic Governance and Development of individuals, communities and societies.	Suite 309, Anbeez Plaza, 15, Ndola Crescent, Wuse Zone 5. Abuja +234 816 360 3067 +234 (0) 8109260016 234 (705) (495) (5792) info@aygf.org https://www.aygf.org
39.	CLEEN Foundation	It was established to promote public safety, security and accessible justice through the strategies of empirical research, legislative advocacy, democratic programmes and publication in partnership with government, civil society and the private sector	21, Akinsanya Street, Taiwo Bus Stop, Ojodu, Ikeja 100281, Lagos +234-8133051024 https://cleen.org
40.	Tender Arts Nigeria	It creates positively impacts children and youths with focus on art therapy, art education, talent development, community development and civic engagement.	3, Egbapeju Street, Lagos, Nigeria (234) 8032256759 info@tenderartsng.org http://www.tenderartsng.org/
41.	Friends of The Environment	It promotes environmental sustainability through advocacy, education, awareness creation and initiatives in the area of renewable energy sources, waste management, economic empowerment and gender issues.	P.O. Box 10627, Lagos, Nigeria +234-01-453-2526 info@fote.org.ng https://fote.org.ng
42.	Plan International	Their mission is to promote children's rights and equality for girls Their activities include: -Ensuring that children continue their education in safety -Reducing maternal and child mortality amongst marginalized and vulnerable women and girls -Nutritional support for mothers and young children -Protecting children from violence -Empowering young people to stand up for their rights and seek accountability from leaders.	No 49, Anthony Enahoro Street Utako District, Abuja +234-8146981331 Nigeria.CO@plan-international.org https://plan-international.org/Nigeria
43.	Access to Education for Children	Promotes education for indigent children	63 Road, 53 Victoria Garden City. Lekki, Lagos. +234 1 4617859

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44.	Business and Professional Women	Provision of education, training and opportunities to help women achieve economic independence.	Club Arcade, Annex 7, Tafawa Balewa Complex, Onikan, Lagos. +234-1-8920997, 08023372585 info@bpwnigeria.org www.bpwnigeria.org
45.	Women in Management and Business	It was formed to improve the success rate of female entrepreneurs and increase the proportion of women in senior positions in corporate organizations.	Suite A3, Falomo Shopping Centre, Awolowo Road, Ikoyi, Lagos +234 1 2712521, 0803 5WIMBIZ wimbiz@wimbiz.org www.wimbiz.org
46.	LEAP Africa	To train, equip and empower a cadre of youths for leadership, effectiveness, accountability etc.	13 Omorinre Johnson Street, Off Admiralty Way, Lekki Phase 1, Lagos. Nigeria. +234 01 454 6007 info@leapafrika.org www.leapafrika.org
47.	Guidance Community Development Foundation	The NGO provides free computer training, children, youth, family support, empowerment, farmers forum, community development, etc.	113/175 Bowen University Road, PO Box 32, Iwo, Osun State. +234 (0) 8034978700, 08057783260, 08057177719 guidanceforever@yahoo.co.uk www.gcmf.com
48.	Foundation for Skills Development	This NGO was established to empower unemployed persons with vocational & technical skills to become self-employed.	3b Allen Lane, off Allen Avenue, Ikeja, Lagos. +234 1 8198108 foundationforskillsdevt@yahoo.com www.foundationforskillsdevelopment.com
49.	The Courage Education Foundation	The NGO dedicated to the empowerment of the Nigerian children through the provision of quality education. It was set up to provide educational assistance to brilliant children who are shackled by poverty.	Water Corporation Road Off Ligali Ayorinde Victoria Island, Lagos Nigeria. +234.808.895.6162 info@trinityhouseng.org https://www.trinityhouseng.org/ngos/
50.	New Nigeria Foundation	New Nigeria Foundation (NNF) is a non-governmental organization that promotes sustainable community development initiatives through public-private partnerships.	Plot 6, Block 128B, Remi Olowude Way, Off Lekki-Epe Expressway, Opposite TREM Church, Marwa Bus Stop, Lekki Peninsula, Lagos contact@nnfng.org +234 802 323 1430; +234 808 213 8501 +234-1-4536925-6 http://nnfng.org/
51.	Accord for Community Development	Accord specializes in the provision of policy-relevant research and strategic blueprints for sustainable management of resources in rural	Address: Suite T14, Febson Mall, Herbert Macaulay Way, Zone 4, Wuse, Abuja.

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		marginal communities as well as disadvantaged urban centres. Accord is actively committed to the building of institutions and structures for the promotion of sustainable development through participatory approaches. To promote sustainable economic development and good governance through institutional strengthening, empowerment, partnership and advocacy.	+234 08036554214 accorddev@yahoo.com https://www.accordfordevelopment.org/
52.	Africa Citizens Development Foundation (ACDF)	Their goal is to promote active citizenship in Africa. This goal is imperative in order to ensure good leadership in each respective African nation.	ACDF Secretariat, 12, Samota Falola Street, Off Fadeyi Street, By Obafemi Awolowo Way, Ikeja, Lagos State. +234 1 4976225, 811524, 08028352791 info@acdf-assefad.org http://www.acdf.assefad.org
53.	ActionAid Nigeria	The goal of ActionAid is to ensure a just, fair and sustainable world, in which everybody enjoys the right to a life of dignity, and freedom from poverty and oppression. It works to achieve social justice and gender equality, and to eradicate poverty.	Plot 590, NAIC Building, 2nd Floor, After Bolingo Hotel, P.O. Box, 1890, Garki, Central Business Area, Abuja. +234 9 2907868, 234880-1; Fax: +234 9 2348482 abuja@actionaid.org http://www.actionaid.org/nigeria
54.	Co-Creation Hub	CcHUB is a social enterprise that provides a physical space for entrepreneurs, technologists, and investors to collaborate and build innovative solutions to social problems in Nigeria. It also provides access to funding, mentorship, and other resources to help entrepreneurs scale their businesses.	The 6th floor, 294 Herbert Macaulay Way, Sabo. Yaba, Lagos. +234 (01) 2950555 info@cchubnigeria.com
55.	The Innovation Hub	The Innovation Hub is a non-profit organization that aims to promote innovation and entrepreneurship in Nigeria by providing access to resources, training, and networking opportunities for entrepreneurs and innovators.	47 Kumasi Cres, Wuse 904101, Abuja, Federal Capital Territory +234809 612 8881
56.	iDEA Hub	iDEA Hub is a non-profit organization that focuses on promoting entrepreneurship and innovation in Nigeria by providing access to funding, mentorship, and training programs.	+234902 814 9715 contact@ideahub.com.ng https://ideahub.com.ng/
57.	The Entrepreneurship and Innovation Centre	This center aims to promote entrepreneurship and innovation in Nigeria by providing access to resources, training, and networking opportunities for entrepreneurs and innovators	Mr Charles Ivenso Lekki - Epe Expressway Ajah, Lagos, info@lbs.edu.ng +234-(0)-8025014623
58.	Women Environmental Program (WEP)	WEP goal is to promote a sustainable society while addressing issues of gender injustices relating to environmental, economic and social rights of women, children and youth.	Mrs P. Achapka, Block E, Flat 2, Anambra Court, Gaduwa Housing Estate, Gudu District, Apo. P.O. Box 10176 Garki, Abuja. +23492910878, +2348117295065 +234 929 10878 info@wepnigeria.net

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
59.	Life Builders	Their primary mission is to improve the lives of the poor, less privileged and internally displaced persons through education and empowerment aids.	Block 1, Flat 2, Zuru Close Area 8 Garki, Abuja info@lifebuildersngo.org lifebuildersinitiativengo@gmail.com
60.	Centre for Information Technology and Development (CITAD)	CITAD sees technology as tool to promote sustainable development, good government and peaceful coexistence. It uses ICT to empower youth and women through access to information, skills and online mentoring opportunities. It utilises such platforms such as social networking, web-to-text interface and tools such as Google alert to provide information that would promote peaceful coexistence. It uses Google alerts to source information about trends of discussion in various platforms, sites and online discussion lists and sites with a view to understanding trends, attitudes and positions such that it can develop appropriate responses to those that are similarly disseminated to either reinforce positive trends or counter and neutralize negative ones	No.1 Social Insurance Road, Trade Fair, Kano www.citad.org +2348068078282
61.	Jigawa Reconnect	Goals of Reconnect Jigawa Initiative: To promote the practice of system thinking and develop collective intelligence think-tank that will reinforce the right mindset in both problem identification and solution design in Jigawa State. -To build Human Capital by empowering the Citizens of Jigawa State with ICT Skills that could help them in maximizing the opportunities offered by ICT in the pursuit of broad-based economic development. -To provide a platform for mentorship where knowledgeable and experienced indigenes of Jigawa State can share their life experiences and wisdom with the younger generation. -To identify and cooperate with public and private bodies and individuals concerned having similar objectives.	Jigawa State. +2348030584263
62.	Azama Development Foundation	We critically investigate outstanding issues in areas pertaining to poverty, unemployment, unemployability, illiteracy and lack of orientation and enlightenment or any other youths and women developmental challenges bedevilling the society. We collect data, analyze and assess to determine relevant needs so as to contextualize the requisite interventions. We analyse data from the interventions to strengthen our model and its impacts on the sustainability of our awareness, education/literacy, entrepreneurship training and development programs.	Office B1, Balan Wada Plaza, opposite CBN, 760215, Gombe +2348133601297
	Research Institutions		

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63.	Nigerian Institute of Science Laboratory Technology (NISLT)	<ul style="list-style-type: none"> • Advancing the science laboratory technology profession in Nigeria. • Determining the standard of knowledge, exposure to equipment, practicals and skills, to be attained by the person seeking to become registered members of the profession and reviewing those standards, from time to time, as circumstances may require. • Promoting the highest standards of competence, practice and conduct among the members of the profession. • Securing in accordance with the provisions of the Act, the establishment and maintenance of a register of members of the profession and the publication from time to time of the lists of those persons. • Serving as an agency to secure, safeguard and advance the professional knowledge, standing, efficiency and interests of science laboratory technologists through the Council. • Conducting examinations and granting certificates and diplomas and advising on, assisting in examinations relating to science laboratory technology in Nigeria. • Conducting research in all the areas of science laboratory technology. 	National Secretariat, Samonda, Sango/UI Road, Ibadan +2348062117814, +2348030787747. inform@nisl.gov.ng enquiry@nisl.gov.ng https://www.nisl.gov.ng/
64.	Federal Institute of Industrial Research, Oshodi	To conduct and promote market-driven research and development for the industrialization and socio-economic development of the country. To assist in accelerating the industrialization of the Nigerian economy through the utilization of the country's raw materials and upgrading indigenous production technologies.	FIIRO Rd, Papa Ajao 102215, Oshodi, Lagos +234 7085770494, 08123185766 info@firo.gov.ng enquiry@firo.gov.ng
65.	National Centre for Energy Research & Development, University of Nigeria Nsukka.	It is designed to be a Centre of excellence for research, development, dissemination, and training in renewable, alternative and other energy technologies.	Innovation Centre UNN, Kwame Nkuruma Way, Ihe Nsukka 410105, Nsukka, Enugu State Engr. Dr. +234 803 562 6680; +234 807 999 0057 okala.nwoke@unn.edu.ng
66.	The Federal University of Technology Minna, Niger state Nigeria (FUTMINA)	FUTMINA is a public research institution committed to the training of a skilled and innovative workforce that will transform Nigeria's natural resources into goods and services driven by entrepreneurship and ICT, to positively affect the economy and thus the quality of life of her people.	Gidan Kwano Minna, Niger State registrar@futminna.edu.ng +234(0) 703 586 2582 info@futminna.edu.ng https://futminna.edu.ng/
67.	Bells University of Technology	Provides an enabling environment for effective learning and teaching, applying the results of research at the cutting-edge of science and technology.	Km. 8 Idiroko Rd, Benja village 112104, Ota, Ogun State 08139327665 info@bellsuniversity.edu.ng https://www.bellsuniversity.edu.ng/

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
68.	Enugu State University of Science and Technology (ESUT)	Promotes scholarship, especially in the areas of Science, Management and Technology, thereby ensuring the development of quality manpower that will utilize technology for the service of society.	Independence Layout, Enugu info@esut.edu.ng For VCs Office +234(0)706-126-2206 For ICT +234(0)811-369-3805 For Registrar +234(0)811-369-3802 https://esut.edu.ng
69.	Federal University of Petroleum Resources, Effurun, Delta State	Creates top-quality human resources to enhance the local content in the Oil & Gas and Energy industry of the country. To design, develop and deliver cutting-edge education and training programmes for professionals in the industry. To engage in research, consultancy, and development activities in all technical and managerial aspects of the oil & gas sector. To take the leadership role in promoting the economic development of the immediate community and the society at large through specific education, training and outreach activities.	Effurun, Delta State. https://fupre.edu.ng/
70.	Michael Okpara University of Agriculture, Umudike, Abia State.	Provides high-quality practical training for students to become professionally competent, and confident persons capable of self-employment, to develop environment-friendly and person-sensitive technologies; and to enhance the well-being of the people through extension services and other interventions. The overall goal is to provide the training of students in a rural setting, aimed at self-reliance, through the inculcation of appropriate entrepreneurship skills.	Umudike, Abia State +234 (0) 9027427974 registrar@mouau.edu.ng officeoftheregistrar@mouau.edu.ng pro@mouau.edu.ng http://mouau.edu.ng
71.	Cocoa Research Institute of Nigeria	The institute is mandated with research on Cocoa, Kola, Coffee, Cashew and Tea	info@crin.gov.ng Ibadan, Oyo state Nigeria
72.	National Research Institute of Chemical Technology	A Federal Government Parastatal whose mandate is to carry out advanced research and development work in chemicals, petrochemicals and natural products, with the aim of providing a globally competitive and environmentally friendly technologies in industrial and agrochemicals, solid minerals, biochemical, manmade fibres and effluent monitoring.	Old Kaduna Road, Zaria Kaduna State info@narict.gov.ng
73.	National Root Crops Research Institute, Umudike	Colleges of Agriculture: The Colleges are basically established for training of middle-level manpower to equip them with ability to utilize the products of the Research Institutes. They serve as extension agents to end-users of research technologies and innovations.	Km 8 Umuahia-Ikot Ekpene Road P.M.B 7006 Umuahia Abia State Website: https://nrcri.gov.ng Mobile +234 806 574 1424
74.	Federal University of Agriculture, Makurdi	Research and development in Science and Technology for sustainable cities and economy	FED. UNI. AGRIC, MAKURDI
75.	Federal University of Agriculture, Abeokuta (FUNAAB)	FUNAAB: training of students and researching agricultural activities.	Abeokuta, Ogun State

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76.	Igbinedion University	Igbinedion University: training of students in Sciences, Engineering and Medicine	Okada, Edo State
77.	Edo University	Training of students in Sciences, Engineering and Medicine	Iyamo, Edo State
78.	Ambros Ali University	Training of students in Sciences, Agriculture, Engineering and Medicine	Ekpoma, Edo State.
79.	Federal polytechnic	Federal polytechnic Auchi: training of students in Sciences, Engineering and social sciences and arts.	Auchi, Edo State.
80.	Nigerian Building and Road Research Institute	An agency under the Federal Ministry of Science, Technology and Innovation into the development of model building including research into road development sector in the country.	10, I. T. Igbani Road, Off Obafemi Awolowo Way, Jabi Abuja.
81.	Sheda Science and Technology Complex (SHETSCO)	A high technology complex with biotechnology, chemistry and physics laboratories. It is a reference research institute. It trains manpower at different levels of science and technology	10km Gwagwalada- Lokoja Highway, Sheda, FCT
82.	National Mathematical Centre	The Mathematical research centre involved modelling and best mathematical deployment at all levels. Train Instructors on the best model to adopt in mathematics and physics learning.	Lokoja Expressway, Kwali, F.C. T
83.	National Space Research and Development Agency	Research and develop into space science and technology. Highly involved in the manpower development in space and space related areas such as remote sensing, disaster monitoring amongst others.	Obasanjo Space Centre, Airport Road, Abuja
84.	Nigerian Institute for Trypanosomiasis Research	Research into the research and development into Trypanosomiasis disease affecting human and cattle.	No. 1, G.R.A Augur Rimi, Kaduna
85.	Lake Chad Research Institute	Research and development of all activities in the Lake Chad region especially issues affecting the Chad basin.	Gamboru Road Maiduguri, Borno State
86.	Institute for Agricultural Research (IAR)	Involved in the research and development of cereals in the northern part of the country	Ahmadu Bello University, Zaria, Kaduna State
87.	Institute of Agricultural Research and Training	Involved in the research and development of mandates cereals crops in the southern part of the country	Moor Plantation, Ibadan, Oyo State
88.	National Cereal Research Institute	Research and develop mainly of cereals	Badeggi, Bida Niger State
89.	Root Crop Research Institute	Research and develop of all root crops in the country. Also trains on all agronomic practices	Umudike, Umuahia, Abia State
90.	National Horticultural Research Institute	Research and development on horticultural crops in the country.	Idi-Ishin, Ibadan, Oyo State
91.	Nigerian Store Product Research Institute	Research and development of all stored products including all activities.	Asa Dam Road, Ilorin, Kwara State
92.	Rubber Research Institute of Nigeria	Research and development of rubber products into value addition.	Iyanomo, Benin City, Edo State
93.	Nigerian Institute for Oil Palm Research	Research and development into Oil Palm and its value chain.	Benin City, Edo State
94.	National Animal Production Research Institute	Research and development into animal vaccines.	Shika, Zaria, Kaduna State
95.	National Veterinary Research Institute	Research and development into animal vaccines.	Vom, Plateau State

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
96.	Institute for Freshwater Fisheries Research	Research and development of freshwater fisheries	New Bussa, Niger State
97.	National Institute for Medical Research (NIMR).	Research and development of human vaccines	Yaba Lagos
98.	University of Benin	University of Benin: training of students in Sciences, Agriculture, Engineering and Medicine.	Ugbowo, Benin city.
99.	Federal University of Technology, Owerri, Imo State	To promote STI through recreating, nurturing and developing uniquely promising students and exceptional staff in Science, Technology and enterprise to the benefit of our globalized world. To operate practical training geared towards transforming the nation's economy from consumer-oriented to production-oriented, with a sound technological base.	+234 805 471 9437 info@futo.edu.ng https://futo.edu.ng/
100.	University of Nigeria, Nsukka	To place STI at the forefront of research and development, innovative, knowledge transfers and human resources development in the global academic terrain, while promoting the core values which will ensure the restoration of the dignity of man. To create a functional, globally competitive and research-focused university which is not just an Ivory Tower but responsive to the needs of society while delivering world-class education and knowledge.	+234 806 360 7400 Mr. Paul Oranu Director, ICT paul.oranu@unn.edu.ng Professor Johnson Urama. johnson.urama@unn.edu.ng Ag. Deputy Vice-Chancellor (Academic) http://unn.edu.ng
101.	University of Ibadan	To expand the frontiers of knowledge through the provision of excellent conditions for learning and research. To contribute to the transformation of society through creativity and innovation.	Deputy Vice-Chancellor (Research, Innovation & Strategic Partnerships) Prof. Oluyemisi A. Bamgbose, SAN, FCI Arb. dvcrisp@mail.ui.edu.ng +234 906 314 3624 uniibadan@yahoo.com http://ui.edu.ng/
102.	Ladoke Akintola University of Technology (LAUTECH)	Provides suitable condition for the advancement of knowledge through research and learning; produce self-reliant graduates, apply technology-driven knowledge to create and positively impact on the global environment and be the epitome of integrity and service.	+(234)-8067624977, +234 703 953 0332 Registrar: registrar@lautech.edu.ng http://www.lautech.edu.ng/
103.	Nnamdi Azikiwe University	It is founded on the philosophy that knowledge should be propagated and disseminated without let or hindrance. The university is committed to the pursuit of knowledge that addresses the important issues of our time and promotes innovation. NAU prepares students to make meaningful contributions to society as engaged citizens and leaders in a complex world.	Enugu-Onitsha Expressway, Ifite Road, Awka, Anambra State https://unizik.edu.ng
104.	Institute of Petroleum Studies, University of Port Harcourt	Equip graduates with broad array of intellectual and technical competencies to meet the needs of the oil and gas industry	Prof Dulu Appah +2349090624900 info-ips@ipsng.org https://www.ipsng.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
105.	Agricultural and Rural Management Training Institute (ARMTI)	Conducts Research on management and development issues in agriculture and rural development, design and facilitates manpower capacity building on identified needs or research findings.	Contact Person: Mr. Gidado Mayowa tellmayor@yahoo.com +234 706 308 6085
106.	Federal University of Technology, Akure (FUTA)	FUTA is a University of Technology and a centre of excellence in training, research and service delivery that promote technological advancement by providing conducive environment for research, teaching and learning engenders development of products that are technologically oriented, self-reliant and relevant to society	Mr. Kupoluyi Ayodele Solomon Ag. Director Computer Resource Centre crcdirector@futa.edu.ng +2347039538389 https://futa.edu.ng/
Private Sector			
107.	enspire Hub	It seeks to stimulate economic growth and sustainable job creation through innovation, entrepreneurship, enterprise development and technology commercialization by providing training, mentoring, networking opportunities and access to investors.	+234 909 000 0952 info@enspire.org.ng +234 813 756 1469 https://enspire.org.ng/
108.	Wennovation Hub	Their role is to partner with great innovators and entrepreneurs who challenge the expected and propel growth. They train innovators in science and technology to become entrepreneurs. They focus on social impact sectors: Agriculture, Healthcare, Education, Clean Energy and Social Infrastructure.	Lagos: +234 902 500 8641 Ibadan: +234 903 147 8517 Abuja: +234 912 797 2803 info@wennovationhub.org https://wennovationhub.org/ info@cchubnigeria.com +234 (01) 2950555 http://www.cchubnigeria.com
109.	Lookman Technical Company	Lookman technical company: production and distribution of yam pounding machine.	Dawncy Road Benin City
110.	Shoe Making Directorate	Shoe Making Directorate: production and training on shoe making.	TV Road, Benin City Edo State.
111.	Brithtence Electronics Company International Ltd.	Brightence Electronic: manufacturing of high-quality solar inverter and panel. Training of young entrepreneur in the production of solar inverter and panels.	30, Federal Government Girls College Road, Benin City.
112.	Nomagbon Pharmaceuticals Limited	Nomagbon Pharmaceutical: production of pharmaceutical drugs and rendering of pharmaceutical services.	Upper Lawani street, Benin city.
113.	Sonic Paint Industry Ltd	Sonic Paint Industry Ltd: Manufactures of special emulsion, texcote, gloss, satin, bond, filler.	Sakponba Road Benin City
114.	P.N.I Solar World	Distributor of solar and inverters.	91A Lagos Street, Benin city.
115.	Master Chemicals & Fertilizer	Master Chemicals & Fertilizer: production of fertilizers for farmers.	Km. 3, Asaba Industrial layout, Ibusa Road, Asaba, Delta State.
116.	Innoson Vehicle Manufacturing Co. Ltd.	Innoson Vehicle Manufacturing Co. Ltd.: manufacturing of various brand of vehicles.	95 Owerri Road, P.O.Box 1068, Umudim, Nnewi, Anambra State.
117.	OCP Africa Fertilizers Nigeria Limited	OCP Africa Fertilizers Nigeria Limited: fertilizer production	Kaduna State, Nigeria
118.	Ayoola Foods Nigeria Ltd	Ayoola Foods Nigeria Ltd: production of yam flour, caasava fufu, plantain flour, rice flour.	Ayoola Street, Gemade Estate, Ipaja Lagos
119.	Thrive Agric	Providing access to finance, premium markets, and data driven advisory for smallholder farmers.	Abuja Nigeria
120.	Flutterwave	Is a technical software partner for banks and financial services providers uses Payment Account Attributes Inquiry, Foreign Exchange Rates and	Lagos Nigeria

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		Visa Direct to bring the convenience of new features like digital payments to consumers across Africa and beyond.	
121.	Nation Newspaper's STI desk	Nation newspaper like most media organizations have an established desk for the reportage of STI and the evolving digital eco system and the start-up sector in the country	Lagos Nigeria
122.	Across Atlantic Limited	Technology transfer and awareness creation	16, Thames Street, Maitama Abuja
123.	Spectra Industries Ltd	Spin off company from the Technology Incubation Centres Employer of labour	Agege, Oko Oba
124.	Goshen Marbles Nigeria Ltd	Utilisation of marbles and industry.	Kuje Industrial Estate
125.	Chiajulu Nigeria Ltd	Utilisation of research and development results	Technology Business Incubation, Enugu
126.	Service Pharmaceutical Company (SPC)	Service Pharmaceutical Company (SPC): manufacturers of drugs such as calamine lotion, methylated spirit, paracetamol syrup etc.	Upper sakponba road, Benin city
127.	Ewu Monastery	Ewu Monastery: production of herbal mixture to managing various ailments	Ewu Esan Central, Edo State, Nigeria.
128.	CANDEL FZE	CANDEL FZE: production of Agro chemicals for farmers	Lekki Free Zone, Ibeju-Lekki, Lagos, Nigeria.
129.	Co-creation hub	CcHUB is Nigeria's first open living lab and pre-incubation space designed to be a multi-functional, multi-purpose space where work to catalyse creative social tech ventures take place. The HUB is a place for technologists, social entrepreneurs, government, tech companies, impact investors and hackers in and around Lagos to co-create new solutions to the many social problems in Nigeria.	info@cchubnigeria.com +234 (01) 2950555 http://www.cchubnigeria.com/
130.	Tiger Foods Ltd.	Tiger Foods Ltd was born out of a passion for amazing foods, flavors, and food ingredients. It is driven by an exceptional in-house R&D support for product development, manufacturing and brand strategy. Products include, spices, seasonings, dehydrated vegetables, blended spices, beverages (spirits and wine), etc.	Km 4 Onitsha-Owerri Road, Onitsha, Anambra state customercare@tigerspices.com info@tigerspices.com
131.	Belphins Nigeria Ltd.	Produces Belphins Ginger Juice With Garlic, Belphins Ginger Juice, split dried ginger, ginger powder, ginger oleoresin, etc.	No 68, Alkali Road, Kaduna, Kaduna State belphins@inet-global.com Info@belphins.com www.belphins.com http://belphins.tripod.com
132.	Avuco Nutritional Products Ltd	Moringa value-added products such as moringa tea, moringa powder, moringa oil, moringa milk, etc.	NO. 2, Kaduna-Kachia Road, Km 54 Iboro Kajuru LGA, Kaduna
133.	Fumman Agricultural Product Industry PLC	The Company produces and markets wholesome fruits and juices. The company aims to deliver safe, innovative, and high-quality products and services that give optimum satisfaction to our customers.	24 John Olugbo St, Allen 101233, Ikeja, Lagos customercare@fummanagric.com
134.	FEEZLUX Concept Nigeria Enterprise	Manufactures Paint	Ofu LGA of Kogi State
135.	GAMLA and Brewtech Nigeria Limited	Hydrated lime processing plant	Plant: Kogi State

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
			Office: 1, Brewtech Street, Ojota, Lagos.
136.	Cresol Chemical Industries Ltd.	Web Offset ink	5, Situ Olasege Str. Temidire , Sango , Ogun
137.	Golden Empress Enterprises Nigeria	Cold starch production	Technology Incubation Centre, 1, Water Board Access Road GRA Warri, Delta State
138.	Innov8 Hub	Innov8 is a focal point for Innovation Startup Incubation, Technology Transfer, Knowledge and Skill Impartation, Prototype Development and Fabrication. Innov8 provides needed workspace, equipment and mentoring to people with ideas they hope to transfer into invention, innovation and solution. The hub incubates, grooms and grows innovation start-ups.	Airport Rd, 900102, Abuja
139.	Vertex Agro Ltd	Engaged in processing and exportation of various agricultural commodities from Africa to the rest of the world. Products include, cashew kernels, cashew and peanut butter, sesame, herbicides, insecticides, etc.	Km4 from Zuma Rock, Abuja-Kaduna Express Way, Dumez, Suleja, Niger State
140.	AbodSuccess Investment Ltd.	Is one of the best and leading Food Industry in the processing and marketing of edible nuts. The company services include, farming, processing, export, fabrication of processing equipment, consultancy, etc.	4, Oko Oba Road Ogijo, Off Ikorodu Sagamu Express Road, Ogun State, Nigeria. · +2348023141892, +2348038282779 · info@abodsuccess.com.ng
141.	Kuban Danbal Nig Ltd	Processing ginger and other spices.	No39ishakuchebutstreetnewkaru , Newkaru, Nasarawa
142.	Moringa Doublequick Investment	Processing moringa into value added products	No.Bo/5508, Gomberoad, Biu, Borno, Biu, Borno State
143.	NELSAG Enterprises International Ltd.	Shea butter processing and packaging. Also conducts training on best practices in shea nuts collection and processing.	Shop 27/26, Farouk Bahugo Ultra-Modern Market, Gariki International Market, Garki, Abuja
144.	A& Shine Nigeria	Honey processing, packaging and marketing	A & Shine Building (Near holy family school), Kango Road, Kuje, Abuja ashinehoney2030@gmail.com ashineltd@yahoo.com +2348139294893 +2347034740040
145.	IREYEESORISE DRY SPICES Ltd	Manufacture, process and export high quality exotic spices and food condiments.	11, Gray-Awani Close, Ajamimogha Okere, Warri, Delta State. ireyeesorisedryspices@gmail.com
146.	VIDSA Multiventures Ltd	Producers of Vidsamor Moringa Tea, Vidsamor Moringa Powder and h2h Moringa Soap	6 Ajayi street, Osungbekun Avenue, Ikolaba GRA, Ibadan info@vmvng.com
147.	Spectra Industries Ltd	Spectra Industries Ltd process and package food items. They also train entrepreneurs on food processing and packaging and produce intermediate products for food industries. The intermediate products are defatted soy flour and	Plot 1, Suco Road, Oko Oba Agege, 120038, Lagos spectranigeria@gmail.com www.spectraindustries.ng

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		cocoa powder. They also train on food processing and packaging method. Some of the product lines they have trained on are tomato, pepper, onion, plantain, pineapple, etc.	
148.	IMIT Nigeria Ltd	Imit Nigeria produces chocolate, which is branded as Imit s chocolate in consumable bar, pastes and in bulk quantities.	Fatai Atere Way Matori Lagos.
149.	DIVAX LTD Nigeria	Products: Sesame Seeds, Fresh/Dried Sliced Ginger, Garlic, Cashew Nuts, Dried Red Hibiscus.	Uite 26, Yasuha Plaza No 5 Bozoum Close Adetokunbo Ademola Crescent, Behind Ap Plaza Wuse Ii Abuja Divaxlimited.Ng@Gmail.com +2348037881732
150.	Agro Park Development Company Limited	Agro Park Development Company Limited is an agricultural asset management company. It is primarily a farm management company involved in the end to end of the agricultural value chain. Our mission is to provide healthier meals for Nations. We manage farmland for Individuals, Corporate organisations, and Institutional investors. The company specializes in the production and processing of spices (turmeric, basil, ginger, etc.)	Suite 201, Celia's Place, Plot 413b, Omofade Crescent, Omole Phase 1, Ikeja, Lagos info@agropark.ng
151.	Erisco Food Ltd	Erisco foods limited, is an indigenous foods product manufacturer firmly committed to producing high-quality products that combine nourishment with value pricing. Products include, Tomato Paste, Seasoning, Rice, Milk cubes, etc.	Plot 2, Oyeleke Street, Oregun, Alausa, Ikeja +23480 91111222 081 34440000 eriscofoodsltd2009@gmail.com www.eriscofoodsltd.com.ng
152.	AgriCapital Ventures Limited	AgriCapital Ventures Limited is committed to connecting global resources to opportunities outside its locality and confinement. We are a trusted partner to farmers while also helping agriprenuers in the entire agricultural value chain with needed solutions and advisory support. They also coordinate products sourcing from different farmers to establish reliable Agricultural supply chains for different end markets.	18, Udi Street, Osborne Foreshore, Ikoyi Lagos info@agricapital.ng
153.	AgroPlus Africa Systems Limited	Is an agritech investment company with extensive interests in the Agri Business value chain. The company owns and operates Nigeria's first EU Standard Multi-Span NFT Hydroponic Greenhouses sitting on a 5-acre property and produces 7 tons of fresh vegetables monthly, servicing major retail outlets across the country. AgroPlus also has over 3,000 hectares of farmland where it produces a wide variety of herbs and spices for both local and export markets. It also has a processing plant where its herbs and spices are processed before forwarding to the markets. The company is currently developing a cold chain logistics system that packages, stores and transports fresh produce across the country and for export.	54b Adeniyi Jones Avenue Ikeja Lagos info@agropplusafrica.com.ng

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
154.	Green Sahara	Green Sahara is on a mission to bring the delicious flavours from the African continent to the wider community of food lovers.	contact@greensaharabrands.com
155.	KOLLINS - RLES GLOBAL LIMITED	Agro, Food and Mineral Products	No. 16, Asofiyan Street, Mushin, Lagos. https://kollinsrlesglobaltd.info/
156.	Peescom & Co Enterprise	Manufactures beverages	9, Bamgbose Street, Ilufe, Lagos firstlive@yahoo.com
157.	Colossus Investment Ltd	Colossus Investment Ltd specialize in high-quality Cocoa beans, Raw Cashew nuts, and Sesame seeds. Also, sale and installation of cashew processing equipment, maintenance and servicing, seedlings for commercial plantation farming, agricultural commodities related input such as jute bags, machines and fertilizers.	Block 2A, Plot 3 Colossus Street, Oregun Mixed Development Scheme, Ikeja Lagos info@colossusinvestments.com
158.	Sona Agro Allied Foods Ltd	Sona Agro Allied Foods Ltd is the biscuit, cereal and snack unit of the Sona Group, and is a producer of many popular rising brands. They manufacture and market food products, especially snack foods, along with trade activities in Agro products. They also manufacture a wide range of chocolate products.	Km 1, Sango State, Ijoko Rd, Ota https://sonaagroalliedfoodsltd.com

e) Rwanda

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
	Government		
1.	Ministry of Education (MINEDUC)	MINEDUC aims to transform the Rwandan citizen into skilled human capital for the socio-economic development of the country by ensuring equitable access to quality education focusing on combating illiteracy, promoting science and technology, critical thinking and positive values.	37H+6W4, KG 7 Ave, Kigali, Rwanda +250 737 093 807 info@mineduc.gov.rw https://www.mineduc.gov.rw/ NIWEMFURA Janvier niwejano@gmail.com 0788697556 FURAHA Sam Furaha123sam@gmail.com 0781413520
2.	Ministry of ICT & Innovation (MINICT)	Addresses national priorities for economic growth and poverty reduction through the development and coordination of national information technology, communication & Innovation policies and programs as well as citizen's empowerment	info@minict.gov.rw +250 786 791 388
3.	Ministry of Agriculture (MINAGRI)	Coordination of the Agriculture sector and policy development.	Arnauld Ishimwe +250788441161; Daniel Mirimo +250784421793 aishimwe@minagri.gov.rw ; dmirimo@minagri.gov.rw www.minagri.gov.rw
4.	Ministry of Local government (MINALOC)	Ensures the coordination of good governance and high-quality territorial administration programs that promote economic, social and political programs/agenda.	+250 788384081/5353 info@minaloc.gov.rw
5.	Ministry of Commerce (MINICOM)	Leads the development of external and internal trade, competitive companies and cooperatives on the market and promotion of investment and consumer rights.	info@minicom.gov.rw +250 788 562 361
6.	Ministry of Finance and Economic Planning (MINECOFIN)	To raise sustainable growth, Economic opportunities, and living standards of all Rwandans	info@minecofin.gov.rw +250 252 577 581
7.	Ministry of Infrastructure (MININFRA)	To ensure sustainable infrastructure development covering transport, energy, water supply and sanitation, housing and human settlement sectors aiming to drive Rwanda's economic growth and enhance quality of life of the citizen	info@mininfra.gov.rw +250 788387125/ 4287
8.	Ministry of Natural Resources (MINERENA)	MINIRENA is a national entity, specifically a public sector ministry, which is responsible for environment, climate change and natural resources management at the local and national levels.	P.O Box 3502 Kigali Rwanda environment.gov.rw

9.	Higher Education Council (HEC)	Is an independent Government Agency responsible for ensuring the structure, organisation and functioning of higher education institutions and monitoring and evaluating the quality and standard of provision and ensuring the quality enhancement of teaching and research. It advises the Minister on all matters relating to the accreditation of higher education institutions. One of the key responsibilities of HEC is to act as a regulatory agency.	First-floor MINEDUC Building P.O Box: 6311 Kigali - Rwanda info@hec.gov.rw
10.	National Commission for Science and Technology (NCST)	Advises the Government on policies, legislation and regulation in the fields of science, technology, research and innovation and monitor the implementation of such policies and legislation'. To achieve its mandate several policy and programs have been implemented.	13 th Floor, Grand Pension Plaza KN 2 Avenue, Nyarugenge - Kigali - Rwanda P.O. Box 2285 Kigali +250781030798 info@ncst.gov.rw https://www.ncst.gov.rw
11.	National Research and Innovation Fund (NRIF)	Promotes National Research and Innovation capacity, performance and Productivity through funding research and innovation that is aimed at stimulating societal and economic growth in accordance with the national development agenda.	13 th Floor, Grand Pension Plaza KN 2 Avenue, Nyarugenge - Kigali - Rwanda P.O. Box 2285 Kigali +250781030798 info@ncst.gov.rw https://www.ncst.gov.rw
12.	National Industrial Research and Development Agency (NIRDA)	Enable a generation of industrial innovators to become competitive through technology monitoring, acquisition, development and transfer & applied research.	Dr Kamana OLIVIER olivier.kamana@nirda.gov.rw
13.	Rwanda Education and Research Networks (RwEdNet)	RwEdNet aims to create a dedicated high-performance data network connecting all research and high learning institutions in Rwanda through a dark fibre.	UbuntuNet Alliance, Off Paul Kagame Road, HB House, Block C
14.	Rwanda Agriculture and Animal Resources Development Board (RAB)	RAB has the general mission of championing the agriculture sector development into a knowledge-based; technology driven and market-oriented industry, using modern methods in crop, animal, fisheries, forestry and soil and water management in food, fibre and fuel wood production and processing.	Dr Esperance MUNGANYINKA esp.munganyinka@gmail.com ; esperance.munganyinka@rab.gov.rw P. O Box 5016 Rubona, Huye District Huye - Rwanda +250788385312 infos@rab.gov.rw www.rab.gov.rw
15.	National Agricultural Export Development Board (NAEB)	Facilitates export and certification of organic exports, especially coffee.	Claude BIZIMANA P.O. Box 104 Kigali-Rwanda www.naeb.gov.rw
16.	Rwanda Standards Board (RSB)	Undertakes all activities pertaining to the development of Standards, Conformity Assessment and Metrology services in the country.	Philibert ZIMULINDA philibert.zimulinda@rsb.gov.rw www.rsb.gov.rw
17.	National Capacity Building Secretariat (NCBS)	Contributes to a strong national workforce and performing organizations that deliver quality	

		services to achieve the national development agenda	
18.	Rwanda Cooperative Agency (RCA)	An Institution in charge of regulating and promoting economic, Social, and other activities of the general interest	info@rca.gov.rw +250 (4163)
19.	Rwanda Environment Management (REMA)	Ensuring that environmental issues and climate change are integrated into Rwanda's development. Specifically, we are mandated to: Mainstream environmental concerns and climate change across all sectors to improve performance and productivity	info@rema.gov.rw +250 3989
20.	Rwanda Information Society Agency (RISA)	Digitizing the Rwandan society through increased usage of Information and Communication Technologies and innovation technology as a cross-cutting enabler for the development of other sectors spearheading Rwanda's digital and social economic transformation	Telecom House 8 KG 7 St, Kacyiru, Kigali P.O. Box 6603 Kigali-Rwanda info@risa.gov.rw
21.	Energy Development Corporation (EDC)	To Increase investment in development of new energy generation projects in a timely and efficient means	KN 82 st 3 PO Box 537 Kigali www.reg.rw +(250)(0)788385025 info@reg.rw Toll free: 2727
22.	Energy Utility Corporation (EUC)	To have devoted attention in providing energy utility services in the Country through operations and maintenance of existing generation plants, transmission and distribution network and retail of electricity to end-users.	KN 82 st 3 PO Box 537 Kigali www.reg.rw +(250)(0)788385025 info@reg.rw Toll free: 2727
Research Institutions			
23.	University of Technology and Arts of Byumba (UTAB)	Training and Research Institution.	Fidel Ndahayo vc@utab.ac.rw / fndahayo@gmail.com
24.	The African Institute of Mathematical Sciences (AIMS)	Is a pan-African network of Centres of Excellence for postgraduate training, research & public engagement in mathematical sciences & STEM	Rue KG590 ST, Kigali, Rwanda info@nexteinstein.org
25.	University of Rwanda (UR): College of Agriculture and Veterinary Medicine (CAVM)	This is the largest public university in the country, with several faculties including the Faculty of Science and Technology and the Faculty of Medicine and Pharmacy. They offer a variety of STI-related courses such as computer science, engineering, and biotechnology.	Guillaume Nyagatare guillaumenyagatare@gmail.com KARUHANGA Collins karuhanga536@gmail.com 0783456584
26.	Kigali Institute of Science and Technology (KIST)	This is a public technical university that focuses on STEM education and research. It offers undergraduate and graduate programs in various fields such as electrical and electronic engineering, computer science, and biotechnology.	http://www.kist.ac.rw/
27.	The Agribusiness Innovation Center	This institution conducts research on agricultural innovation and provides	Near 337C+M72 Center for Innovation Rwanda, KG 684 St

		training and support to farmers and agribusinesses.	
28.	Rwanda Polytechnic	This is a public TVET institution that provides training in technical and vocational fields such as engineering, ICT, and construction.	info@rp.ac.rw 0791447408
29.	Kigali Health Institute (KHI)	A public institution that focuses on health science education and research, offering programs in fields such as nursing, laboratory technology and public health.	www.khi.ac.rw Grading system Kigali P.O. Box 3286 Rwanda 250 572172
30.	Institute for Policy Analysis and Research (IPAR)	Conducts research and analysis on public policies with the goal to inform proper policy formulation and implementation. Our core areas of focus include Agriculture, Rural Development and Settlements; Social Development; Governance; Economic Growth and Transformation; Environment and Natural Resources Management.	Street KG 627 St Building 4, Kimihurura, Kigali - RWANDA +(250) 789 099 704 info@ipar-rwanda.org
31.	Carnegie Mellon University in Rwanda	A private university providing training and research	Regional ICT Center of Excellence Bldg Plot No A8, Kigali Special Economic Zone Phase II
32.	University of Global Health University	A private university providing training and research	23WV+R53, Kigali 0786 405 072
33.	Adventist University of Central Africa	A private university providing training and research.	Masoro Hill, City of Kigali P. O Box 2461, Kigali Rwanda +250 724796998 info@auca.ac.rw https://auca.ac.rw/
34.	Protestant Institute of Arts and Social Sciences	A private university providing training and research	Huye Campus/ Karongi (+250)-788-235-566 info@piass.ac.rw https://www.piass.ac.rw/
35.	Catholic University of Rwanda	A private university providing training and research	Academic Registrar: +250784364536 catholic.university.rwanda@cur.ac.rw
36.	Kabgayi Catholic University	A private university providing training and research	Southern Province of Rwanda, Muhanga District, Nyamabuye Sector +250 789 800 070 info@uck.ac.rw https://www.uck.ac.rw/
37.	Kibungo University of Agriculture, Technology and Education/ Institute of Agriculture, Technology and Education of Kibungo (INATEK)	A private university providing training and research	info@unatek.org
38.	Kigali Independent University (ULK)	A private university providing training and research.	+250788304086 or +250788304173 info@ulk.ac.rw https://ulk.ac.rw/

39.	Kigali Lay Adventist University	A private university providing training and research.	+250 791 591 773 info@unilak.ac.rw https://site.unilak.ac.rw/
40.	Rwanda Pentecostal University/Christian University of Rwanda	A private university providing training and research.	(+250) 788-310-047 (+250) 788-310-048 registrar@chr.ac.rw http://www.chur.ac.rw
41.	ETO (École Technique Officielle) Kicukiro	A public TVET institution that offers training in fields such as electrical engineering, mechanical engineering, and ICT.	+250 786 696 977
42.	The Institute of Technology of Kigali (INTEC)	A private TVET institution that offers training in fields such as computer science, engineering, and business management.	KN 7 Ave, Kigali Hours: Closes soon · 5 pm · Opens 8 am Wed
43.	NZIZA Training Academy	Nziza Training Academy is a professional skills consulting firm that has won several awards. They work with companies in the Architecture, Engineering, ...	190 KK 15 Rd, Kigali 0785 568 718
44.	Rwanda Institute for Conservation Agriculture (RICA)	RICA is an internationally recognized, accredited higher education institute in Rwanda, that specializes in conservation agriculture and One Health principles	Gashora 0789 035 532
45.	World Agroforestry Center	ICRAF opened an office in Rwanda in 1988, starting out by understanding land use systems in Rwanda, propose options by context, capacity building and investing in the training of undergraduate and graduate students, of researchers, government extension officers, civil society and beneficiary farmers.	Rwanda - World Agroforestry www.worldagroforestry.org
46.	International Center for Tropical Agriculture (CIAT)	IITA aims to enhance food security, income and well-being of resource-poor people primarily in the humid and subhumid zones of sub-Saharan Africa by conducting research and related activities to increase agricultural production, improve food systems, and sustainably manage natural resources, in partnership with	http://www.ciat.cgiar.org
47.	International Union for Conservation of Nature (IUCN)	To influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable	IUCN-Rwanda. @IucnRwanda . Official Twitter for IUCN Rwanda Country Office. Rwanda
Non-Governmental/ Civil Society Organizations			
48.	GiZ	International NGO working in the agriculture subsector	Helge Michael Sato helge.sato@giz.de
49.	Korea International Cooperation Agency (KOICA)	is one of KOICA's main programs to support partner countries securing the needed human resources for their	34 KG 13 Ave, Kigali +250788 385 236

		development. The primary objective of the Fellowship ...	
50.	Japan International Cooperation Agency (JICA)	JICA is in charge of administering all ODA such as technical cooperation, ODA loans and grant aid in an integrated manner, except for contributions to international organisations.	JICA Rwanda Office Japan International Cooperation Agency Immeuble EBENEZER Boulevard de l'Umuganda, Kacyiru Kigali, Rwanda P.O. Box 6878 Kacyiru,
51.	Participatory Ecological Land Use Management (PELUM) Rwanda	Is a growing network of civil society organizations in Rwanda, passionate about equity, people-driven development, and integrity of creation, working towards a sustainable local community empowerment, food security and prosperity by facilitating networking, capacity building and advocacy	Johnson Mwebaze kamjohnson06@yahoo.com +250 788301319 Kigali.
52.	Rwanda Organic Agriculture Movement (ROAM)	Advocates for organic agriculture	Lisa Chantal, the CEO +250 788848454 Kigali
53.	Catholic Relief Service (CRS)	CRS engages Catholics to live their faith in solidarity with the poor and suffering people of the world. CRS is motivated by the example of Jesus Christ to ease suffering, provide development assistance, and foster charity and justice.	KN 78 St, Kigali +250788 307 256
54.	Youth Impact Mission	An initiative that aims at youth leadership development and reaching out to the youth in Rwanda and neighbouring countries with the message of reconciliation with God and fellow man.	Rwanda Youth Impact www.rwandayouthimpact.org
55.	The Rwanda Women's Network (RWN)	This CSO focuses on promoting gender equality and the empowerment of women in Rwanda through education, research, and advocacy.	Address: KG 504 St, Kigali (+250) 0788 334 257
56.	The Association of ICT Professionals in Rwanda (APRICT)	This CSO promotes the use of information and communication technologies (ICTs) to advance social and economic development in Rwanda.	
57.	African Development Bank (AfDB)	The African Development Bank (AfDB) provides access to information on all of its lending projects.	Rwanda African Development Bank www.afdb.org
58.	World Bank Group	The policy and institutional reform program is the anchor of its support to the Government of Rwanda on human capital development, and it has	jdoe@worldbank.org
59.	United Nations Development Program (UNDP)	UNDP works to eradicate poverty and reduce inequalities through sustainable development. Donate to UNDP to help build a more sustainable future. Make a Difference Today.	Address: 4 KN 67 St, Kigali (+250)252 590 400
60.	Swedish International Development	Gives expertise in areas that are essential for country's development	Rwanda - Sida www.sida.se

	Cooperation Agency (Sida)		
61.	United Nations Industrial Development Organization (UNIDO)	UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental.	office.rwanda@unido.org Tel: +250 590406; +250 590470;
62.	Belgian development agency (ENABEL)	Improve the infrastructure of marketplaces and build roads connecting these commercial centers. In addition, ENABEL works with the Government of Rwanda.	KN 67 St, Kigali +250280 300 159
63.	Bill & Mellinda Gates	Helps RAB to develop a soil information service for improving soil fertility and land use management by smallholder farmers in Rwanda. Grantee	Rwanda Agriculture Board - Bill & Melinda Gates Foundation www.gatesfoundation.org
64.	Rockefeller Foundation	Promote the well-being of humanity throughout the world. Today the Foundation advances new frontiers of science, data, policy, and innovation to solve global challenges related to health, food, power, and economic mobility.	
65.	The International Institute for Water and Environmental Engineering (2iE)	Focuses on providing education, training and research in the field of water, sanitation and environment management.	
66.	Alliance for a Green Revolution in Africa (AGRA)	AGRA role is aligned with the Government of Rwanda's Strategic Plan for the Transformation of Agriculture (PSTA IV). It works with partners and the Government of Rwanda to increase incentives for private sector participation and investment into the sector while also enhancing access to finance and markets; the adoption of climate smart technologies and use of inputs (seeds and fertilizer).	Jean Paul Ndagijimana Kigali Heights Building 5th Floor, P.O. Box 1269 Kigali, Rwanda info@agra.org
67.	Kepler	Is a non-profit higher education program that operates a university campus in Kigali, Rwanda. It is one of the first programs worldwide to integrate massive open online courses (MOOCs), flip teaching, and other education technology practices into a blended learning curriculum, with the goal of lowering the cost of higher education without a reduction in academic quality or outcomes.	KG 29 Ave 16 +250782 637318 www.kepler.org
68.	USAID- Feed the Future- Innovation Lab for Horticulture	International NGO supporting research and innovation. It advances fruit and vegetable innovations, empowering smallholder farmers to earn more income while better nourishing their communities.	horticulture@ucdavis.edu

69.	ActionAid	International NGO working in the Organic agriculture subsector.	Josephine Uwamariya Josephine.Uwamariya@actionaid.org
70.	Vi-Agroforestry	International NGO working in the Organic agriculture subsector.	Jean Rukundo jean.rukundo@viagroforestry.org
71.	Rwanda Rural Rehabilitation Initiative (RWARRI)	Improvement of the overall food security situation and nutrition in the targeted population, and management of the environment and natural resources, through capacity building and advocacy.	Uwizeye Belange/Kayonza +250 788585554 info@rwarri.com https://www.rwarri.com/
72.	Rwanda Organization for Development Initiatives (RODI)	Contributes to the formation of new generation of development agents and competitive small farmers in Rwanda. From 2012 to date RODI has supported more than 20,000 Farmers and Young Entrepreneurs in the framework of Value chain Development, Job creation, access to finance through Saving and Lending Internal Communities (SLICs) and Job placement.	Ahimana Chryso +250788756347 Rwanda, Kigali, Kicukiro, Diamond House 2nd Floor +250788756347 rodiorganization@gmail.com www.rodirwanda.org IRAGENA Josiane Josiane.rodi@yahoo.com +250787946413
73.	Rwanda Development Organisation (RDO)	The mission of RDO is to empower partner communities including those vulnerable to improve their human capital, achieve food and nutrition security, and establish market linkages in a sustainable natural environment.	Rwibasira Eugene +250788301740 rdevpt@yahoo.com P.O Box 368 Kicukiro, Kigali Rwanda info@rdorwanda.org.rw +250788525956 / +250788501092
74.	Rwandan Association for Promotion of Integrated Development (ARDI)	Protection of the environment for green growth and climate resilience mainly focused on beekeeping.	Musabimana Patrice +250 252573961, Kigali info@ardirwanda.org
75.	Consultative Council of Organisations Supporting Basic Initiatives (CCOAIB)	This is an umbrella organization of Rwandan local NGOs working in various sectors of development including agriculture and the environment.	Ngendandumwe Claude P.O. Box 1993, Kigali +250 788302065 ccoaib29@rwanda1.com
76.	Vi-LIFE Programme Rwanda	Provides technical advisory services in agroforestry, sustainable agriculture and climate change mitigation.	P.O. Box 2911, Kigali, Rwanda +250 788 304 868 rwanda@viagroforestry.org
Private Sector			
77.	Association for the Development of Nyabimata (ADENYA)	Organic production of cereals and horticulture.	Kulikiyinka Gabriel P.O. Box 226, Butare +250 788564089 gkulikiyinka@yahoo.fr adenya@adenya.org
78.	Agropharm Africa Ltd	Manufacturer of liquid and powder organic and eco-friendly pesticides.	Theresa Karitanyi +250 788303282/ +250 788433530 jmuzamugura@agropharmafrica.com
79.	GAKO Organic Farming Training Centre	Provides sustainable agriculture or organic farming training.	P.O. Box 3047, Kigali, Rwanda goftc2008@yahoo.com .
80.	AGRIMAX ACCESS Ltd		NSEKANABO J.De Dieu jadonseka@gmail.com

81.	DUTERIMBERE (A Women financing company)	Horticultural development through planting materials, use of solar drying in food processing, enhancing food security through food bulking and training youth in enterprise development.	Mukeshimana Dativa P.O. Box 738 Kigali +250 788442851 duterimb@rwanda1.com
82.	Private Sector Federation (PSF)	PSF is a professional organization, dedicated to promoting and representing the interests of the Rwandan business community. It is an umbrella organization that groups 10 professional chambers.	Kigali, Gikondo, Magerwa, P O. Box 319 Kigali Rwanda secretariat@psf.org.rw +(250) 788 123 300 2233 MIRIMO Daniel danielmirimo@gmail.com +(250) 784421793
83.	KLab Rwanda	An innovation hub that focuses on technology and entrepreneurship, providing training, mentoring, and resources for tech start-ups.	44 KG 548 St, Kigali, Rwanda 6th Floor, Telecom House P. O Box 5121 info@klab.rw https://klab.rw/
84.	VibeTech	A technology company that specializes in developing software solutions for various industries, such as agriculture and health care.	
85.	Horticulture Innovation Lab in Rwanda	As part of Feed the Future, the Horticulture Innovation Lab has conducted research in Rwanda focused on reducing postharvest losses for fruit and vegetable crops, advancing local postharvest expertise, and improving local seed systems, among other topics critical to horticulture development.	
86.	Inyenyeri	A company that provides clean energy solutions, such as biogas systems and solar energy systems, to rural communities in Rwanda.	Mr. Eric Reynolds, CEO eric.reynolds@inyenyeri.org http://www.inyenyeri.org
87.	Rwanda Biomedical Centre	A public-private partnership that focuses on promoting research and innovation in the biomedical field.	Welcome to RBC www.rbc.gov.rw
88.	BRCK Rwanda	A technology company that develops rugged and portable internet solutions for use in remote and challenging environments.	
89.	Mobile Telephone Network (MTN)	Is a Regional telecommunication company	MTN Rwanda www.mtn.co.rw
90.	AITEL/Tigo	Is a Regional telecommunication company	Airtel Rwanda www.airtel.co.rw
91.	Institute of Research and Empowerment for Business Operations (IREMBO)	Focuses on providing research and training to support the development of the private sector in Rwanda, with a particular emphasis on small and medium-sized enterprises (SMEs). An Online government services rendering company in Rwanda).	Irembo irembo.gov.rw
92.	Bank of Kigali	Bank of Kigali in Rwanda offers a range of finance products like savings accounts, loans, insurance, investments, debit & credit cards and other banking services	KN 4 Ave Kigali/ Rwanda, No12 Plot No 790 P.O. Box 175, Kigali/RW (250) 788 143 000 bk@bk.rw

93.	Kenya Commercial Bank/Popular Bank (KCB)	KCB Bank in Rwanda offers a range of finance products like savings accounts, loans, insurance, investments, debit & credit cards and other banking services	KCB; Address. 18 KN 4 Ave, Kigali, Rwanda +250 252 570620 +250 252 570621 ; +250 788 140 400 https://rw.kcbgroup .
94.	ZIPLINE Technology c	Automated logistics company that designs, manufactures, and operates drones to deliver vital medical products. Zipline's mission is to provide every human on Earth with instant access to vital medical supplies.	Zipline - Instant Logistics www.flyzipline.com
95.	Muraho technologies (East African QA services)	As the leading Software Testing services provider in Rwanda, our model for Tech Services focuses on winning and bringing international tech services projects ...	Address: KG 563 St, Kigali +250788 310 402
96.	Andela technologies	Empowering Rwandans to become world-class engineers. The Andela Technical Leadership Program (ATLP) is a 9-month program that covers the technical	Andela Rwanda rwanda.andela.com
97.	Entiengie ACCESS	ENGIE Energy Access Rwanda offers expandable solar home systems, providing lighting, phone charging, TV, radio and more, financed through affordable.	Rwanda - ENGIE Energy Access engie-energyaccess.com
98.	AgroTech+	AgroTech+ provides a platform where small-scale farmers can improve their farm produce by provision of loans, which have low interest rates to enhance purchase.	Address: KN 3 Rd, Kigali +250 252 572 944
99.	Light Rwanda	Off-grid solar is poised to play a major role in meeting Rwanda's target.	Rwanda - Lighting Global www.lightingglobal.org
100.	Spenn	SPENN app is a new and better kind of Mobile Banking. Transactions shouldn't cost you money, so we've made it fee-free for you to send money and receive.	Address: KN 78 St, Kigali +250 781 288 255
101.	CANAL+ (Box) TV1	CANALBOX Rwanda. Provides unlimited very-high speed fiber internet for the homes.	Canal Box www.canalbox.rw
102.	Impact Hub Kigali	A co-working and innovation space that hosts events, training, and networking opportunities for entrepreneurs and innovators.	Address: 34 KN 41st, 3rd Floor & Rooftop at The Office Building, KN 41 St, Kigali +250 788 544 203
103.	ICT Chamber of Rwanda	A private sector organization that promotes the growth and development of the ICT sector in Rwanda.	Address: KG 7 Ave, Kigali (+250) 0781 161 487
Media			
104.	Rwanda Broadcasting Agency (RBA)	Rwanda Broadcasting Agency is the public media house. Rwanda TV, KC2, Radio Rwanda, Magic FM and Community Radios.	Rwanda Broadcasting Agency (@rba.rwanda) www.instagram.com > rba.rwanda

105.	BTN TV	official Twitter of Big Television Network. Rwanda's leading informative, business and Entertainment TV Station	KN1 Road, House 22
106.	FLASH Radio & TV	Flash Radio & TV. Updated on. Aug 22, 2019. News & Magazines. Data safety. Developers can show information here about how their app collects and uses your ...	Flash Radio & TV (@flashfmrw) / Twitter twitter.com > flashfmrw
107.	PACIS TV	A catholic radio & TV	Address: 24XC+3R7, Kigali Phone: (+250)0780 599 197
108.	TV 10	First independent radio in Rwanda, before establishment of its TV.	RADIOTV10 – Simply Rwandaful radiotv10.rw
109.	KISS FM	Description: KISS FM is Kigali's number 1 hit music station and can be heard on 102.3 FM in Kigali and around the world on tunein.	102.3 KISS FM www.kissfm.rw
110.	KT Radio	KT Radio - Real Talk, Great Music. KT Radio is an independent news, information and entertainment radio station.	KT Radio www.ktradio.rw
111.	Radio 1	Radiol Rwanda is known for playing ongoing biggest hits and at the same time the hit's of yesterday's. It's a complete package for those	Radio 1 Rwanda - Live Radio Streaming - Kigali - InLife TVs & Radios radio">www.inlife.tv > radio
112.	ISANGO Star Radio & TV	This channel belongs to ISANGO STAR RADIO AND TELEVISION. It will serve to stream live talk shows and all related Television programs.	Isango Star 91.5 www.isangostar.rw
113.	Radiyo MARIYA	online to Radio Maria 97.3 MHz FM for free – great choice for Kigali, Rwanda. Listen live Radio Maria with Onlineradiobox.com	Address: BP 52 Muhanga Province du Sud/Rwanda Phone: +250 784 870 045
114.	UMUCYO Radio	Umucyo Radio is the first Christian radio station in Rwanda. They fully broadcast Gospel since 2005 up to now. They have seen too many lives changing through.	Umucyo Radio www.umucyoradio.com
115.	IZUBA Radio	Radio Izuba is one of the most popular online radio stations in Rwanda. Listen to Radio Izuba Rwanda live streaming 24 hours at liveonlineradio.net.	Radio Izuba - Live Online Radio Rwanda">liveonlineradio.net > Rwanda
116.	AUTHENTIC Radio	A Christian Radio Station airing variety of Christian Content from Music to Sermons to Inspirational Messages. English · Website.	Authentic Radio - 92.8 FM Kigali Rwanda - Raddio.net Rwanda">raddio.net > Rwanda
117.	The NEWTIMES	Writes news and analysis from Rwanda and East Africa on business, politics, sports, lifestyle.	The New Times www.newtimes.co.rw
118.	KIGALI Today	Kigali Today, News about Rwanda and headlines from Africa. Writes news about its people, politics and economy from Kigali Today.	Kigali Today www.kigalitoday.com
119.	IGIHE.Com	This is a locally famous online news agency	https://www.igihe.com/
120.	UMUSEKE.Com	An online news agency	Umuseke – Amakuru y'umwihariko umuseke.com

f) Senegal

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
	Government		
1.	Ministry for Higher Education, Research and Innovation (MESRI)	Preparation and implementation of the higher education and scientific research policies.	Prof Salif GAYE Director-Department of Innovation, Development, Intellectual Property and Technology Transfer sgaye@univ-thies.sn +221775293245
2.	Ministry of Economy, Finance and Planning (<i>Ministère de l'économie et des finances</i>).	Is responsible for managing the country's economic and financial policies, as well as overseeing the development and implementation of economic and social programs.	Rue René Ndiaye BP 4017
3.	Institute for Food Technology (Institut de Technologie Alimentaire, ITA)	An institute for research and development in food processing vocation.	+221 33 859 07 07
4.	Ministry of Agriculture and Rural Equipment (MAER)	Policymaking and registration of agroecological practices in policies strategies.	+221338242580 infos@agriculture.gouv.sn
5.	The Center for Experimental Research and Study of Equipment (<i>Centre expérimental de recherches et d'études pour l'équipement-CEREEQ</i>)	Is a government research organization that focuses on the development and study of equipment and technologies in Senegal.	+221 33 831 00 05
6.	Ministry of Infrastructure, Land Transport and Opening-up (<i>Ministère des Infrastructures, du transport terrestre et du Désenclavement</i>)	Is a government agency responsible for the development of infrastructure, land transport, and opening-up in Senegal.	+221 33 849 88 88 / 33 849 88 38 / 33 849 07 60 mittdgouvsn@gmail.com
7.	The Upgrading Office (<i>Bureau de Mise à Niveau-BMN</i>)	Responsible for the development and upgrading of Senegalese industry.	+221 338697770
8.	The Ministry of Commerce (<i>Ministère du commerce</i>)	Responsible for managing and regulating commerce and trade activities in Senegal. Promotes export, regulates trade, fosters collaboration and encourages investment.	+221 33 869 21 20 commerce@commerce.gouv.sn
9.	Senegalese Export Promotion Agency (<i>Agence Sénégalaise de Promotion des Exportations-ASEPEX</i>)	Responsible for promoting exports from Senegal.	Immeuble HDP 10, VDN Lotissement Cité Police, en face Mermoz, Senegal +221 33 869 20 21
10.	Agency for Development and Supervision of Small and Medium Enterprises (<i>Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises-ADEPME</i>)	Responsible for promoting and supporting the development of small and medium enterprises (SMEs) in Senegal. It provides support to SMEs in areas such as financing, marketing, and technology transfer, helping to promote the growth and competitiveness of these companies and to support the development of new technologies and products.	Mmeuble Seydi Djamiil Ave Cheikh Anta Diop x Résidence, Rue Leo Frobenius, Dakar, Senegal +221 33 869 70 70

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
11.	The Agency for the promotion of investments and major works (<i>Agence pour la promotion des investissements et grands travaux-APIX</i>)	Responsible for promoting and attracting foreign investment in Senegal by providing information and support to companies and investors.	Rue Mohamed V, Dakar 18524, Senegal +221 33 849 05 55
12.	State Computer Development Agency (<i>Agence de Développement de l'Informatique de l'Etat-ADIE</i>)	Responsible for the development and management of information technology (IT) systems and infrastructure in Senegal.	Technopôle Dakar, 1st building on the left. Site Adie, Pikine BP:6944 Dakar Etoile Senegal +221 33 879 34 34
13.	High Authority of the Special Economic Zone (<i>Haute Autorité de la Zone Economique Spéciale-HAZES</i>)	Responsible for the management and development of Special Economic Zones (SEZs) in Senegal. It fosters innovation by creating a favourable environment for innovation, technology transfer, and R&D.	+221 77 853 33 99 contact@senegal.org
14.	National Agency for Statistics and Demography (<i>Agence nationale de la Statistique et de la Démographie-ANSD</i>)	Plays an important role in the collection, analysis, and dissemination of statistical data in Senegal.	Rocade Fann Bel-air Cerf-volant. BP 116 Dakar RP, Dakar, Senegal +221 33 869 21 39
15.	Bourse Nationale de Soustraitance et de Partenariat (BNSTP)	Is a national platform that facilitates partnerships and subcontracting between local and international companies in Senegal.	+221 33 860 37 01 bnstp.senegal@gmail.com
16.	National Bank for Economic Development (<i>Banque nationale de Développement économique-BNDE</i>)	BNDE is a government-owned bank that provides financial support to businesses and individuals in order to promote economic development in Senegal.	+221 33 829 20 20 contact@bnde.sn Place Soweto, Immeuble Rivonia BP 6481
17.	National Union of Chamber of Trades, Industry and d'Agriculture in Sénégal (UNCCIAD)	UNCCIAD is a national organization that represents the interests of businesses and industries in Senegal.	1 Place de l'Indépendance BP 118 Dakar Senegal +221 33 823 71 89
18.	National Council for Research and Technological Development (CNRST)	This council is responsible for the coordination and promotion of research and technological development in Senegal.	access.cnrst@gmail.com
19.	National Agency for the Promotion of Scientific and Technical Research (ANRST)	This agency is responsible for the promotion and financing of scientific and technical research in Senegal.	Aïssatou Sophie Gladima Siby https://www.senegal.org/en/administration/executive-power/national-agencies/orgdetails/356
20.	National Observatory for Science and Technology (ONST)	This observatory monitors and evaluates the development of science and technology in Senegal.	Ousmane Fall
21.	National Institute for Higher Education in Technology and Management (INSEAD)	This institute provides higher education and training in technology and management in Senegal.	
22.	National Institute for Research in Nuclear Science and Technology (INSTN)	This institute conducts research in nuclear science and technology in Senegal.	
	Private Sector		

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
23.	ITTC SUARL (Touba International Trade Company - SUARL)	Supply of organic agricultural products including cashew nuts, mangoes and white sesame seeds.	Ben Bassirou, Dakar, Senegal www.toubainternational.com
24.	Chamber of Commerce, Industry and Crafts (<i>la Chambre de Commerce, d'industrie et d'artisanat-CCIA</i>)	Is a private organization that represents the interests of businesses in Senegal. Helps to build collaboration between businesses, governments, and other stakeholders	1 Independence Square Dakar, Senegal +221 33 889 76 80 +221 33 823 93 63 cciad@orange.sn info@cciad.sn https://cciad.sn/
25.	The Gambia River Valley Producers Association (APROVAG)	Supports the production of organic bananas.	+221 339815062 www.aprovag.org/mutuelle.html
26.	ENERGECO Ltd	Selling and installation of its own solar energy systems for rural electrification and solar-powered pumps and machines for processing agricultural products.	Libasse NIANG Directeur Général energocosn2@gmail.com +221776354731
27.	SODEFITEX	Purchase and processing of cotton, as well as the supply of farm inputs to the farmers.	Thierno Kante. Email, thierno.kante@sodefitex.sn BP 3216, Dakar +221 338897950 dg@sodefitex.sn www.sodefitex.sn
28.	Environment Development Action for the Natural Protection of Terroirs (ENDA-PRONAT)	Training on organic production of cotton, cereal crops and vegetables. Also supports the processing and marketing of organic cotton.	Karfa Diallo BP 3370 Dakar, Senegal Mobile: +221 77 640 85 95/ +221 33 889 34 39 Fax: +221 33 842 86 81 www.endapronat.org
29.	Inspire Senegal	Exports certified organic hibiscus leaves, peanuts, groundnuts and sesame.	+221 77 113 19 01 contact@inspire-export.com
30.	Yakaar Niani Wulli Federation	Production and processing of organic cotton.	Ngouye Camara BP.13, Koussanar, Tambacounda, Senegal yaniwulli@yahoo.fr www.yaniwulli.org
31.	Buur Sine	Production and export of certified organic mangoes.	Amacodou Diouf +221338321281/77 656 88 20 Dakar, Senegal amacodoud@hotmail.com www.buursine.com
32.	ANS Inter-Export	Export of certified organic mangoes and green beans.	Amadou Ndiaye Seck +221776455495, Dakar. an.seck@voila.fr
33.	Agronegoce	Production and export of organic mangoes and green beans.	Oumar Sow +2212772623115 Fax: +221338481412 agronegoce@yahoo.fr
34.	Cooprofel	Production and export of organic mangoes and other vegetables.	Amadou Diakhate +22176598280, Thies, Senegal amadoudiakhate56@yahoo.fr

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
35.	Baonane SARL	Production of organically certified baobab	Adama Mbaye Tel. +221 33 9432287 contact@baonane.org
36.	TOLBI	Agri-tech develops innovative AI-based solutions for climate-smart agriculture.	Mouhamadou Lamine KEBE mailto:mouhamadouamine.kebe@esp.sn +221 779428094
37.	Africa GreenTec	Empowers people to achieve more self-determination and growth through sustainable energy solutions.	Anna NDIAYE an@africagreentec.com +221 776349092
38.	Huawei Senegal	is a multinational technology company that operates in various countries around the world, including Senegal. Contributes to: -Research and Development -Technology Transfer -Skills Development -Infrastructure Development -Public-Private Partnership	PFRJ+9V3, Rte des Almadies, Dakar, Senegal +221 33 869 75 18
39.	Incubator fab lab Orange	Is technology incubator that provides access to digital manufacturing tools and resources for entrepreneurs, inventors, and makers. Incubator fab lab Orange in Senegal plays a significant role in STI in the country by providing support to local entrepreneurs, start-ups, and makers	www.orange-fab.sn https://orangedigitalcenter.sn/
40.	Incubator of UCAD	Provides training and support to local entrepreneurs, and start-ups.	BP 5005 Dakar-Fann rectorat@ucad.edu.sn https://www.ucad.sn/node/171
41.	Club of Investors of Senegal (CIS)	is an organization that brings together businesses, investors, and entrepreneurs to promote investment and economic development in Senegal.	Ngor behind the gaz station shell, Dakar (+221) 33 822 92 73 contact@clubdesinvestisseurs.org
42.	Sonatel Academy	Is the first free coding school created by Sonatel to contribute to the employability of young people through digital professions.	Ecole Police, Immeuble Scalène Mermoz lot B, Rue KA 05, Dakar, Senegal +221 33 839 21 00 https://orangedigitalcenter.sn/sonatel-academy/
43.	Senfab Lab	Is a space for creativity, learning, prototyping and sharing which aims to popularize digital technologies, promote training through practice...	Villa 23 Missirah, Grand Yoff 77 651 72 35 contact@senfablab.org
44.	CTIC Dakar start-ups Incubator	Provides support and resources to early-stage start-ups and entrepreneurs in Senegal.	3 Rue, Beranger Ferraud, DAKAR +221 33 842 49 00 contact@cticdakar.com
Research Institutions			
45.	Sahel-Vert Training Centre	Research and Training centre for Organic and Ecological Agriculture.	Djibril Thiam BP 781, Thies +221 33 954 17 96 +221 76 558 88 00

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
			formation@sahel-vert.org thiamdjibril@yahoo.fr
46.	Senegalese Institute of Agricultural Research (ISRA) (<i>Institut Sénégalais de Recherches Agricoles</i>)	Development and validation of agroecological innovations and practices.	Dr. Alioune Fall Director-General, +221338591725 dgisra@isra.sn
47.	Université Cheikh Anta Diop Dakar (UCAD)	Training and Research Institution.	Prof. Aminata Niang DIENE Directrice aminata.niang@ucad.edu.sn +221776374951 Prof. Cheikhou KANE Chef de division propriété intellectuelle et valorisation des résultats de recherche cheikhou.kane@ucad.edu.sn +221771487961
48.	Centre de Coopération Internationale en Recherche Agronomique pour le Développement (French Agricultural Research Centre for International Development)- CIRAD	The French agricultural research and international cooperation organization working for the sustainable development of tropical and Mediterranean regions.	42, rue Scheffer, 75116 Paris France Tel.: +33 1 53 70 20 00 www@cirad.fr
49.	Ecole Supérieure Polytechnique	Supports innovation and excellence in research and teaching.	Prof. Vincent SAMBOU vincent.sambou@ucad.edu.sn +221 763183965
50.	Higher Institute of Professional Education (ISEP)	ISEP is a higher education institution that provides professional training and education in various fields.	Still being established
51.	Higher Polytechnic School of Dakar (ESP)	ESP is a higher education institution that focuses on engineering and technological education.	Université Cheikh Anta Diop, Dakar 10700, Senegal +221 33 824 05 40
52.	Centre de Recherche en Sciences Naturelles et Technologies (CRSNT)	CRSNT is a research center that focuses on the natural sciences and technologies.	Rte des hydrocarbures, Dakar (+221) 776 191 966 alassane.fall@isra.sn
53.	National Institute for Research in Applied Sciences and Technology (INRAT)	This institute conducts research in applied sciences and technology in Senegal.	
54.	National Institute for Research in Science and Technology of Materials (INSTM)	This institute conducts research in the science and technology of materials in Senegal.	Via G. Giusti, 9 50121 Firenze (ITALY) segreteria@instm.it instm@pec.it
55.	National Institute for Research in Computer Science and Control (INRIA)	This institute conducts research in computer science and control in Senegal.	
56.	Senegal Virtual University	Facilitates efficient and accessible Higher Education through a digital open space in each Department in the country. Teaching	Building OUSMANE DIOP Lot E1 next to the station Elton - Ouest Foire-

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		commenced in February 2014 with over 2,000 students enrolled for the first academic year,	Dakar, BP 15126 Dakar-Fann (+221) 30 108 41 53 contact@uvs.edu.sn
57.	National Center for Research and Technological Development (CNRDT)	This center provides technical assistance and support for research and technological development projects in Senegal.	
58.	Centre de Recherche en Sciences et Technologies de l'Information et de la Communication (CRSTIC)	Plays a role in researching and advancing the field of information and communication technologies in Senegal.	BP 5005 Dakar-Fann rectorat@ucad.edu.sn
59.	Centre de Recherche en Sciences de la Mer (CRSM)	Plays a role in conducting research and advancing the field of marine science in Senegal.	26, Rte de la Corniche Estate, Dakar, Sénégal · centredelamer@arc.sn +221 33 821 32 21 +221 33 821 32 21
60.	The Senegal Academy of Science and Technology (ANSTS)	ANSTS was created at the end of the constitutive General Assembly on 9 November 1999. ANSTS is a consultative structure, a consultation and assistance body for both, public and scientific authorities, a centre of competence and expertise for the design of knowledge and the indispensable renewal of knowledge and thinking.	Ousmane Fall 61, Boulevard Djily MBAYE, BP 4344 RP , Dakar , SN http://www.ansts.sn secretariat@iapartnership.org
61.	Centre de Recherche en Sciences Agronomiques (CRSA)	Plays a role in conducting research and advancing the field of agricultural science in Senegal.	Rte des hydrocarbures, Dakar (+221) 776 191 966 alassane.fall@isra.sn
62.	Centre de Recherche en Sciences de l'Ingénierie et de l'Environnement (CRSIE)	Conducts research in the fields of engineering and environment. CRSIE focuses on advancing scientific knowledge and developing new technologies in these areas, as well as providing support and guidance to organizations and industries that work in these fields.	Mr FAYE ALIOUNE Université Cheikh Anta Diop de Dakar +221773787325
63.	Institut de Recherche en Sciences de la Santé (IRSS)	Conducts research on the health sciences.	4 Rue 2 D1 POLE URBAIN DE DIAMNIADO BP 7325, Dakar, Senegal +221778582668 +221766562757 contact@iressef.org
64.	Institut des Sciences de la Mer et de l'Aquaculture (ISRA-Mer)	Conducts research and provide expertise in the field of marine and aquaculture science. The institute's main objectives are to contribute to the development and implementation of policies, programs, and projects related to marine and aquaculture resources, as well as to provide scientific and technical support for the sustainable management and development of these resources.	Dakar Thiaroye B.P. 2241 Rte des Hydrocarbures Dakar http://www.isra.sn/ +221 77 303 41 29
65.	Institut Sénégalais de Recherches en Sciences de l'Information et de la Communication (ISRIC)	Conducts research in the field of information and communication sciences. This research helps to advance the development of the ICT	Dr Alioune FALL alioune.fall@isra.sn http://www.isra.sn dgisra@isra.sn

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		sector in Senegal and contributes to the overall development of the country's STI landscape.	
66.	Centre d'Études et de Recherches sur les Énergies Renouvelables (CERER)- Institut de Recherche en Énergie (IRE)	Conducts research and provide support in the field of energy. Its objective is to contribute to the development of sustainable energy solutions, support innovation and entrepreneurship, and transfer knowledge and technology to industry and government.	Mr. Issakha Youm Route du Service Géographique (HB-87) X Rue HB-478, Hann Bel-Air B.P. 476 Dakar, iyoum2@yahoo.fr
67.	Institut de Recherche pour le Développement (IRD)	IRD contributes to the development of the country by carrying out research programs in fields such as environmental sciences, sustainable development, and health. These programs aim to address local challenges and contribute to the development of scientific and technological capacities in Senegal.	BP 1386 – CP 18524 Dakar - Senegal Campus International IRD/UCAD de Hann +(221) 33 849 34 02 +221 33 849 35 35 senegal@ird.fr Tania WADE tania.wade@ird.fr
Non-Governmental and Civil Society Organizations			
68.	National Federation for Organic Agriculture (FENAB)	Promotes organic agriculture through the provision of advice and support on organic farming.	Doudou Diop +221774736465 fenabsen@yahoo.fr / iseck@yahoo.fr
69.	Dynamics for Agroecological Transition in Senegal (DyTAES)	It is the national platform which advocates for the development of agroecological agriculture in the country.	Laure Diallo Laure.diallo@enda.org
70.	National Council for Consultation and Cooperation of Rural People (CNCR)	Farmer organization offering advocacy services for EOA development.	Thierno Cisse Thiernocisse@cncr.org
71.	Point Senegal Foundation (Fondation Trade Point Sénégal - TPS)	is a non-profit organization that aims to promote trade and investment in Senegal.	+221 33 839 73 73 tpdakar@tpsnet.org
72.	Federation of Agropasteurs de Diender (FAPD)	Promotes sustainable agriculture and creates awareness of agroecology.	Mor Diop +221773199383 fapd1@yahoo.fr / cndiop19@gmail.com
73.	Innovation, Environment and Development in Africa (IED)	Knowledge management, documentation and popularization at other scales and advocacy with policymakers.	Mamadou Fall +221775755378 mfall@iedafrique.org
74.	Promoting Local Innovation (PROLINNOVA)	International learning network to promote local innovation in ecologically oriented agriculture and Natural resource management.	Assane Guèye / Djibril Thiam agueye.gueye@gmail.com thiamdjibril@yahoo.fr www.prolinnova.net
75.	Promoting Peasant Experimentation and Innovation in the Sahel (PROFEIS)	This is an action-research programme that explores how the embedding of research and extension within farming communities can enable a constructive exchange of experience and knowledge between farmers, extensionists and researchers.	Djibril Thiam thiamdjibril@yahoo.fr

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
76.	Association Sénégalaise pour l'Innovation et l'Entrepreneuriat (ASIE)	Has a public service mission for the promotion of Invention and Technological Innovation. Its objective is to make the productive sectors more competitive, to supervise and support industrial, agricultural and/or artisanal projects. Priority is given to innovative projects that bring growth with high added value and are likely to create jobs.	Liberty 6 extension, opposite Camp Leclerc, www.aspit.sn
77.	Association pour la Promotion de l'Innovation et la Recherche Technologique (APIRT)	Is a French organization that aims to promote innovation and technological research. Its role is to support and facilitate the development of new technologies, innovations, and research initiatives. This can be achieved through various activities such as providing funding, networking opportunities, and facilitating collaboration between industry, academia, and government.	(+221) 338 273 614 (+221) 338 694 770 aspit@aspit.sn ba.idrissa@gmail.com http://www.aspit.sn
78.	Plateforme Sénégalaise des Organisations de la Société Civile pour le Suivi et l'Evaluation des Politiques Publiques (PSOSC)	Is a Senegalese platform that aims to ensure transparency and accountability in the implementation of public policies. Its role is to monitor and evaluate the implementation of public policies in Senegal and to ensure that they align with the needs and interests of the citizens. This can be achieved through various activities such as conducting research and analysis, organizing public forums and consultations, and advocating for reforms and improvements in public policies.	Sicap Foire N° 10687. Dakar SENEGAL. (+221) 33 827 54 94 supportposceas@gmail.com
79.	Réseau des Organisations de la Société Civile pour l'Eau et l'Assainissement (ROSC EA)	is a network of civil society organizations in the field of water and sanitation. Its role is to advocate for the effective and sustainable management of water and sanitation resources and services, particularly in rural and marginalized areas. This can be achieved through various activities such as promoting the participation of communities and civil society in water and sanitation decision-making processes, conducting research and analysis, and advocating for reforms and improvements in water and sanitation policies and practices.	Sicap Foire N° 10687. Dakar SENEGAL. (+221) 33 827 54 94 supportposceas@gmail.com
80.	Fondation pour l'Enfance et l'Education (FEE)	Is a French foundation that aims to support children and education. Its role is to provide financial, material and moral support to children and educational institutions, in order to help ensure that children have the best possible start in life and have access to quality education. This can be achieved through various activities such as providing scholarships, donating educational materials and equipment, and supporting educational programs and initiatives.	David Montoya Administrator davidmontoya@fee.org
81.	Fondation pour l'Innovation et la Recherche en Sciences Appliquées (FIRSA)	Is a French foundation that aims to support innovation and applied research in the fields of science and technology. Its role is to provide	https://fondation-fi.org/

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		funding and support for research and innovation initiatives that have the potential to impact society in positive ways.	
82.	Groupe de Recherche et d'Appui en Sciences Sociales (GRASS)	Supporting social sciences research and advocacy in Senegal.	https://www.fabriquesdesociologie.net/groupe-recherche-action-en-sciences-sociales-%E2%80%A2-grass/
83.	Association Sénégalaise pour la Promotion de l'Energie Renouvelable (ASPER)	Supports the development of renewable energy sources in the country and to promote the use of renewable energy technologies in the energy mix. The association achieves this through various activities such as awareness raising, training and capacity building, research and development, and the promotion of investment opportunities in the renewable energy sector.	
84.	Clean Energy Solutions Center	Helps governments around the world design and adopt policies and programs that support the financing and deployment of clean energy.	Louis Seck Lseck2@yahoo.fr +221 776475619
85.	Environmental Development Action in the Third World (ENDA)	An association of autonomous entities coordinated by an Executive Secretariat whose essential aim is to fight against poverty for sustainable development.	Sécou SARR secousarr@endatiersmonde.org +221 770990601
86.	Consortium pour la Recherche Economique et Sociale (CRES)	Promotes research likely to equip political decision-makers, local authorities and civil society organizations in the formulation and implementation of social and economic development policies, both at a national and regional level.	Dr. Fatou CISSE fatcis2@gmail.com https://www.cres-sn.org/?playlist=f7f177c&video=a567006
	Media		
87.	Sciences et Avenir Senegal	A digital magazine that focuses on science, technology, and innovation in Senegal.	Seyllou Columnist Sciences et Avenir Senegal partnerships@sciencesetavenir.fr https://www.sciencesetavenir.fr/tag_lieu/senegal
88.	L'Ecole de la Recherche	A digital magazine that focuses on science, technology, and innovation in Senegal.	https://www.larecherche.fr/
89.	Innovations Senegal	A digital magazine that focuses on science, technology, and innovation in Senegal.	
90.	STI Africa	A website and blog that focuses on science, technology, and innovation in Africa, including Senegal.	https://sti-africa.com/
91.	Techno Senegal	A website and blog that focuses on science, technology, and innovation in Senegal.	pr.tecno@tecnomobile.com
92.	SenegoTech	A website and blog that focuses on science, technology, and innovation in Senegal.	https://senego.com/ +221 33 823 43 43
93.	STI Sen	A website and blog that focuses on science, technology, and innovation in Senegal.	

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94.	AfricaSTI	A website and blog that focuses on science, technology, and innovation in Africa, including Senegal.	hello@africasti.com.ng https://africasti.net/
95.	Science et Technologie au Sénégal	A website and blog that focuses on science, technology, and innovation in Senegal.	28 Avenue des Ambassadeurs, Fann, Dakar (221) 33 825 98 41
96.	Walfadjri	A daily newspaper that covers national and international news, politics, business, and culture.	http://www.walf-groupe.com/
97.	Dakaractu	An online news outlet that covers national and international news, politics, business, and culture.	Serigne Diagne Director of Publication dakaractu@gmail.com (+221) 33 865 24 71 / 77 683 85 85
98.	Le Soleil	A daily newspaper that covers national and international news, politics, business, and culture.	https://lesoleil.sn/
99.	L'Observateur	A daily newspaper that covers national and international news, politics, business, and culture.	Ndiaga Ndiaye Publication director +221 33 869 91 82 +221 33 849 16 40 pub@gfm.sn https://www.lobs.sn/
100.	Le Quotidien:	A daily newspaper that covers national and international news, politics, business, and culture.	(+221) 775485854 lequotidien@lequotidien.sn https://lequotidien.sn/
101.	Sud Quotidien	A daily newspaper that covers national and international news, politics, business, and culture.	+221 33 824 33 06 sudquotidien@yahoo.fr https://www.sudquotidien.sn/
102.	EnQuête	A weekly news magazine that covers politics, society, and culture.	info@enqueteplus.com https://www.enqueteplus.com/
103.	La Gazette	A weekly news magazine that covers politics, society, and culture.	+221 77 853 33 99 contact@senegel.org
104.	Le Point	A weekly news magazine that covers politics, society, and culture.	https://www.lepoint.fr/tags/senegal

g) Uganda

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
Government			
1.	Ministry of Science, Technology and Innovation (MoSTI)	Mobilizes, coordinates and provides strategic oversight and policy guidance to scientists and stakeholders along the prioritized industrial value chains to increase productivity, import substitution and export of knowledge-based products and services.	Dr Peter Wanyama petwanyama@gmail.com Dr. Maxwell Otim Onapa maxwell.otim@gmail.com ; Maxwell.otim@mosti.go.ug ;
2.	Uganda National Council for Science and Technology (UNCST)	Develops and implements policies and strategies for integrating Science and Technology (S&T) into the national development policies; advises the Government of Uganda on policy matters necessary for promoting S&T and; coordinates and guides national R&D in Uganda.	Kwehangana M Science Officer, UNCST +256414705500 musakwehangana@gmail.com
3.	Kiira Motors Corporation (KMC)	Champions value addition in the nascent Motor Vehicle Industry in Uganda through Technology Transfer, Contract Manufacturing and Supply Chain Localization.	Paul Musasizi Chief Executive Officer & Engineer at Kiira Motors +256 393517888 pmusasizi@kiiramotors.com info@kiiramotors.com
4.	Ministry of Agriculture, Animal, Industry and Fisheries (MAAIF)	Focuses on transforming subsistence farming into commercial agriculture.	Mr. Michael Odong Principal Agricultural Inspector +25677 592265 mikeodong@yahoo.co.uk info@agriculture.go.ug
5.	Ministry of Gender, Labour, and Social Development	Promotes employment and productivity, positive cultural values, rights of vulnerable groups and gender-responsive development.	Mr. Charles Etoma +256414534201/ +256312202051 etomacharles@gmail.com esp@socialprotection.go.ug
6.	Ministry of ICT and National Guidance (MoICT&NG)	Coordinates and facilitates research, innovation, and technology transfer along the prioritized industrial value chains namely, Pathogen Economy, Mobility, Industry 4.0+, infrastructure innovations, Aeronautics and Space Science for increased productivity, import substitution and export.	Mr. Silas Ngabirano +256772424502 info@sti.go.ug
7.	Ministry of Water and Environment (MoWE)	Promotes and ensures the rational and sustainable utilisation, development and effective management of water and environmental resources for the socio-economic development of the country.	Plot 3-7 Kabalega Crescent Road, Luzira P. O. Box 20026 Kampala, Uganda +256 417 889 400 mwe@mwe.go.ug www.mwe.go.ug
8.	Ministry of Education and Sports (MoES)	Focuses on providing technical support, guiding, coordinating, regulating, and promoting the delivery of quality education	Mrs. Irene Lubega +256772593638

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
		and sports to all persons in Uganda; for national integration, and individual and national development.	permasec@education.go.ug
9.	Ministry of Trade Industry and Cooperatives (MTIC)	Develops and promotes a competitive and export-led Private Sector through accelerating industrial development for economic growth.	Mr. Tony Lubwana James +256781421979 mintrade@mtic.go.ug
10.	Ministry of Energy and Mineral Development (MEMD)	Establishes, promotes the development, strategically manages and safeguards the rational and sustainable exploitation and utilization of energy and mineral resources for social and economic development.	Amber House, Plot 29/33, Kampala Road Kampala, Uganda +25641 4344414 ict@energy.go.ug
11.	Ministry of Works and Transport (MoWT)	MoWT plans, develops and maintains an economic, efficient and effective transport infrastructure.	P.O Box 7174, Plot 57-59, Jinja Road, Kampala, Uganda. mowt@works.go.ug/ support@works.go.ug +256 414 320 101
12.	Ministry of Lands Housing and Urban Development	Ensures a rational sustainable and effective use and management of land and orderly development of urban and rural areas as well as safe, planned and adequate housing for socio-economic development.	Plot 13-15 Parliament Avenue P. O. Box 7096 Kampala mlhud@mlhud.go.ug
13.	Directorate of Industrial Training (DIT)	Focuses on developing occupational standards, regulating work-based training schemes, applying and expanding the Uganda Vocational Qualifications Framework, accredit assessment centers, and assessing and awarding Uganda Vocational Qualification.	Mr. Mwangi Fred +256772668181 info@dituganda.org
14.	Uganda National Council for Higher Education	To ensure that relevant and sustainable quality higher education is provided at all Higher Educational Institutions in Uganda through strategic intervention areas.	Dennis Omvia Ag. Head of Planning & Development +256393262140/1 domvia@utam.ac.ug info@unche.or.ug www.unche.or.ug
15.	National Information Technology Authority (NITA)	Coordinates, promote and monitor Information Technology (IT) developments in Uganda within the context of National Social and Economic development.	Mr. Obitia Richard +256782952213 info@nita.go.ug
16.	Law reform commission	Reforms and update the laws of Uganda in line with the social, cultural and economic needs and values of the people of Uganda	Workers House, 8th Floor P.O. Box 12149, Kampala Plot1, Pilkington Road, Kampala +256-414 346200 /341138 ulrc@ulrc.go.ug
Research Institutions			
17.	Uganda Industrial Research Institute (UIRI)	Undertakes applied research and develops and/ or acquires appropriate technologies in order to create a strong and effective and competitive industrial sector in Uganda.	Prof. Charles Kwesiga P.O Box 7086, Kampala, Uganda +256-414-286245 info@uri.go.ug

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18.	Uganda Virus Research Institute (UVRI)	Conducts health research pertaining to human infections and disease processes associated with or linked to viral etiology and provides capacity building to target beneficiaries.	Professor Pontiano Kaleebu Director UVRI +25641320385/6 directoruvri@uvri.go.ug
19.	Uganda National Health Research Organization (UNHRO)	Provide stewardship for the coordination and conduct of quality health research and its application in the country.	Dr Harriet Nabudere. Deputy Director General +256-414-321766 unhrodesk4@gmail.com
20.	Makerere University College of Business & Management Sciences	Produces high caliber professionals and promotes research and knowledge transfer in Economics, Statistics, Business Management and Population Sciences, for informed policy and sustainable development.	Prof Joseph OBUA M P. O. Box 7062, Kampala – Uganda +256 414530115 pr@bams.mak.ac.ug jobua09@gmail.com
21.	Namulonge Agricultural and Animal Production Research Institute	Provides farmers with a selection of varieties that meet both farmers' needs and market requirements in terms of post-harvest characteristics.	P. O. Box 22002, Naggalama. Mukono Uganda. +256 41 573016 naari@afsat.com
22.	Kawanda Agricultural Research Institute (KARI)	Brings about positive change in the livelihood of producers by generating technologies for improving and sustaining productivity of the mandate commodities and systems. Its main focus is on bananas and horticultural crops, post-harvest crop losses, and soils and soil fertility management.	Road 7 Kms Bombo Road P.O Box 7065, Kampala, Uganda. +256414567507 karidir@starcom.co.ug
23.	The Consortium for enhancing University Responsiveness to Agribusiness Development Limited (CURAD)	Produces young innovative and skillful agribusiness entrepreneurs through strategic partnerships that support investment in agribusiness by fostering collaboration between Makerere university, NUCAFE and the NARO coffee research centre to create cultures and environment that will value, encourage and enable innovation and produce graduates who are problem solvers, decision takers and successful entrepreneurs.	P.O. Box 1509, Kampala, Uganda +256 (0) 392-834425 +256787-984028 info@curadincubator.org
24.	E4Impact Foundation	Leading force for the creation and growth of sustainable enterprises in Africa, by offering training, access to markets, and financing opportunities to Impact Entrepreneurs	Oscar Wamalwa +256780881534 oscar.wamalwa@e4impact.org
25.	Kyambogo University	Advances and promotes knowledge and development of skills in science, technology and education and other fields having regard to quality, equity, progress and transformation of society.	Dr. John Okuonzi Director Directorate of ICT Support (DICTS) +256782353034 jokuonzi@kyu.ac.ug
26.	Mbarara University of Science and Technology	Provide quality and relevant education at national and international levels with particular emphasis on Science and Technology and its application to community development.	Prof. Celestino Obua Vice Chancellor +256 485421623 vc@must.ac.ug
27.	Busitema University	Provides high-standard training, engage in quality research and outreach for socio-economic transformation and sustainable development.	Prof. Paul Waako Vice Chancellor P. O. Box 236, Tororo +256-4544-488 vc@adm.busitema.ac.ug

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
28.	National Agricultural Research Organization (NaCRR)	Generates, promotes and disseminates appropriate crop technologies, knowledge and information.	Plot 3, Lugard Avenue, Entebbe +256414320178 connect@naro.go.ug dg@naro.go.ug
29.	National Forestry Resources Research Institute (NaFORRI)	Generate and disseminate appropriate technologies on forests and tree resources for increased productivity, conservation of biodiversity and enhanced environment.	Plot 3, Lugard Avenue, Entebbe +256414320178 connect@naro.go.ug dg@naro.go.ug
30.	Nabuin Zonal Agricultural Research and Development Institute	Conducts and manages applied and adaptive agricultural research and facilitates the development and dissemination of appropriate technologies that address specific needs of the North Eastern agroecological zone.	Dr. Drake Mubiru NARO-SLM Coordinator, +256781-413478/ +256774-465941 drakenmubiru@yahoo.com
31.	Mukono Zonal Agricultural Research and Development Institute (MUZARDI)	Conducts adaptive research and support effective use of innovative products and practices for sustainable agricultural transformation	Dr. Beatrice Akello Omonuk, Director +256 414 90232 +256 705495242 director@muzardi.go.ug director.muzardi@naro.go.ug
32.	National Livestock Resources Research Institute (NaLIRRI)	Improves productivity of Uganda's livestock sector through the generation and promotion of efficient, cost-effective and safe technologies and innovations	Dr. Halid Kirunda Director of Research +256-454448360 info@nalirri.or.ug
33.	Rwebitaba Zonal Agricultural Research and Development Institute.	To innovate for sustainable agricultural transformation	Dr Robert Kajobe Director of Research +256 483 427520 / 772590482 rwebitabadirector@gmail.com
34.	National Agricultural Research Organization (NARL)	Researches on food biosciences & agribusiness, biosystems, agricultural engineering, soils, environment, agro meteorology, biodiversity, biotech & bananas.	Dr Tushemeriewe Wilberforce Director of research +256414320178 director.narl@naro.go.ug / directornarl@gmail.com
35.	National Semi Arid Resources Research Institute (NASARRI)	Take research aimed at cultivars development, maintenance and conservation through germplasm collection, characterization, evaluation, breeding, maintenance and generation of appropriate crop management technologies for sustained production now and in the future.	Dr. Kalule Okello Director Research +256753858768 kod143@gmail.com
36.	National Coffee Research Institute Uganda (NACORI)	Conduct and manage basic and applied research of strategic nature and national importance in all fields pertaining to coffee and cocoa.	Geoffrey Arinaitwe Director NACORI, +256414697659 directornacorid@gmail.com
37.	Kachwekano Zonal Research and	Improves farming systems and livelihoods in the SWHAEZ through conducting strategic,	Alex Barekye Director of Research +256486426495

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
	Development institute (KAZARDI)	applied and adaptive research on priority commodities	director.kazardi@naro.go.ug / kazardi.director@gmail.com
38.	ABI Zonal Agricultural Research and Development Institute	Enhance the institute's ability to address the region's Agricultural research needs and specifically contribute to the improved livelihood of over 2,661,000 people and sustainable development.	Sadik Kassim Director of Research (+256) 772 553 732 (+256) 782 453 858 jeremoyie@yahoo.com odama.e7@gmail.com
39.	Bulindi ZARDI	Make calcium bentonite commercially viable for sustainable agricultural production and mainstream SLM technologies into maize enterprise for sustainable production.	Richard Nyenje SLM specialist +256787451967 rnyenje@gmail.com
40.	Buginyanya Zonal Agricultural Research and Development Institute (BugiZARDI)	Promote agronomic practices and integrated soil fertility management practice, adoption of minimum tillage practice, adoption of high yielding and drought tolerant germplasm and above all integration of adoption of the landscape approach in SLM implementation	Arthur Wasukira Research Officer +256782427527 awasukira@gmail.com
41.	Ngetta Zonal Agricultural Research and Development Institute	Manages and carries out applied and adaptive research relevant to the needs of farmers in the mid-Northern and Northern agro-ecological zone comprising 17 districts in Acholi and Lango Sub-region.	Dr. Laban Turyagenda Director of Research +256 414690335 / +256 437 427748
42.	The national Fisheries resources research institute (NaFIRRI)	Generates knowledge base, develops and disseminates fisheries technologies for increased but sustainable fish production, conservation of the fisheries genetic resources, water quality and fish habitat, and to develop and manage the fisheries and required linkages with stakeholders.	Dr. Winnie Nkalubo Director of Research +256 434121369 / +256 434 120484 director@firi.go.ug firi@firi.go.ug wncalubo@yahoo.co.uk
Non-Governmental Organizations (NGOs)/Civil Society Organizations (CSOs)			
43.	Regional Universities Forum (RUFORUM)	Promoting links with, and understanding of, conditions in rural areas and to expose students and faculty to the rewards of service through the supported projects.	Evaline Acan Corporate Communications, & Advocacy officer communications@ruforum.org
44.	Research and Education Network of Uganda	Facilitates research and education networking among its member institutions through interconnecting them with other research and education networks as well as to the commercial Internet worldwide, thereby overcoming the traditionally high costs of information and knowledge sharing and exchange.	Derrick Ssemenda dssemenda@renu.ac.ug
45.	Africa Innovation Institute	Undertakes research and innovation development on agriculture and food systems to ensure sustainable increase in smallholder farmers' income, food and nutrition security as well as environmental sustainability in Eastern and Central Africa.	Timothy Berocan P. O. Box 34981, Kampala-Uganda +256 (0) 414 530 288/+256 (0) 414 699 080 info@afrii.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
46.	Uganda National Association of Professional Scientists	An NGO that represents the interests of professional scientists in Uganda and promotes science, technology, and innovation in the country.	Gloria Onika Okello Business Development Specialist +256 775220700 glo.acen@gmail.com
47.	Science Foundation for Livelihoods and Development	An NGO that works to promote the use of science, technology, and innovation to improve livelihoods and support socio-economic development in Uganda.	Brenda Nyadoi Administration/Accounting Officer +256392-833315 admin@scifodefoundation.org
48.	Innovations for Poverty Action	An NGO that works to promote the use of science, technology, and innovation to address poverty and other social challenges in Uganda.	Suleiman Asman Regional Director East Africa +256414 669840 sasman@poverty-action.org
49.	Tropical Institute of Development Innovations (TRIDI)	Influences individuals, communities, ministries and governments in the tropics to access and use science, technology and innovations in exploration, production, processing, and manufacturing.	Dr Clet Masiga Wandui Executive Director +256 200911069 info@tridi.org
50.	Startup Uganda	Supports organizations working together to improve collective capacities, influence and impact, and to create a more enabling environment for innovators and entrepreneurs — that, in turn, drives development across Uganda.	CK Japheth Secretary Startup Uganda info@startupug.com
51.	Uganda Women Entrepreneurs Association Limited (UWEAL)	Provides opportunities for women to meet and share experiences on how to start, sustain and grow businesses.	Mercy Babirye Head of Partnerships +256414343952/+ 256 778608054 uweal@uweal.co.ug
52.	Educate!	Tackles youth unemployment by partnering with youth, schools, and governments to design and deliver education solutions that equip young people in Africa with the skills to attain further education, overcome gender inequities, start businesses, get jobs, and drive development in their communities.	Hawah Nabbuye Uganda Country Director +256 (0) 393 266 074
53.	Accion	Empowering families, small businesses, and communities overlooked by the global financial system to give them the financial tools they need to improve their lives.	Robert Ongodia Director for Accion Global Investments +256 773698245
54.	AgDevCo	Invests to grow sustainable and impactful agribusiness	Benard Ssewagaba Finance Manager +256 (0)200 923 864 info@agdevco.com
55.	Mara Launch Pad	Creates sustainable economic and business development opportunities for young business owners via our Mara Launchpad incubation centres, Mara Launch Fund and Mara Mentor.	Ashish J. Thakkar, Founder and Managing Director + 256 392 880 241 info@mara-launchpad.org .

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
56.	American Chamber of Commerce in Uganda	To bring together a community of USA brands and businesses, US citizens participating in community development in Uganda, and Ugandan-based businesses wanting to do business with the USA in a platform for sharing business, new investment opportunities, and cross-cultural exchange.	Samantha Karungi Administrative Assistant, AMCHAM Uganda +256 (0)78 254 3825
57.	World Vision Uganda	Seeks to address causes and effects of poverty through development, relief and advocacy.	Gilbert Kamanga National Director (+256)0417114200 uganda@wvi.org
58.	Japan International Cooperation Agency (JICA)	focuses on improving the environment to attain economic growth, raising incomes in rural areas, improving the living environment (health services and water supply), and providing support in the northern region.	Mr. Fukuhara Ichiro Senior Representative +256-393-000014, +256-200-911123
59.	Abaana community outreach Africa	Create sustainable socioeconomic changes capable of generating lasting impacts on communities affected by deprivation. Important key target groups of ACO Africa are children and women.	John Bosco Ssenyondo Executive Director +256 772193630 info@aco-africa.com
60.	Action Aid Uganda	To achieve social justice, gender equality, and poverty eradication by working with people living in extreme poverty and exclusion, their communities, people's organizations, activists, social movements and their supporters.	Mr. Arthur Larok Country Director +256 705 90968 info.uganda@actionaid.org
61.	Action for Climate Change and Environmental Conservation (ACCEC)	Youth-led organisation working in the following areas; Climate change mitigation and adaptation, environment conservation, poverty eradication, clean water, renewable energy, climate-smart agriculture, Gender Based Violence, HIV/AIDS awareness and Nutrition.	Paul Kalungi +256788100873 info@actionforrecu.org
62.	Action for Development (ACFODE)	Contributes to the effective implementation of programmes that economically empower women and girls in Uganda.	Regina Bafaki Executive Director +256393114/890 acfode@gmail.com
63.	Action for Fundamental Change and Development (AFFCAD)	Aims to provide quality education and skills to young people in vulnerable urban communities in Uganda.	Prudence Atukwatse Executive Director +256 750 859 254 info@affcad.org
64.	African Wildlife Foundation	Helps the government of Uganda establish wildlife tourism in its existing protected areas to narrow the significant financial gap for Uganda's protected areas.	Sudi A. Bamulesewa Country Director, Uganda +256 393266652 africanwildlife@awf.org
65.	African Forum for Agricultural Advisory Services (AFAAS)	Enhances utilization of improved knowledge and innovations for improving productivity oriented towards individual and national development objectives.	Dr Silim Nahdy Executive Director +256 312313400 info@afaas-africa.org
66.	African Diversity and Inclusion Center	They use needs-based and rights-based approaches to programming by promoting full community involvement and mobilizing all indigenous and local resources to take part in addressing their own challenges.	Ipolito Mubiru Executive Director +256-788-174-121 info@africandicenter.org

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
67.	Advocacy Coalition for Sustainable Agriculture (ACSA)	To empower civil society organizations working with smallholder farmers to advocate for favourable agrarian Policy environment for sustainable communities. Advocacy, research & capacity	Florence Nassuuna Network champion +256 772 463 220/+414 670 400 community@namati.org info@acsa-ug.org
68.	Facilitated Action for Community Transformation (FACT)	Empowering communities through trainings, creating awareness and promotion of appropriate technologies to improve health, livelihoods and nutrition.	Akena Patrick Network Champion +256 111 745 619 995 643 884 hello@factmw.org
69.	African Women and Youth Action for Development	Empower vulnerable women, children and youth, to rise up against inequality & violence; and actively participate in socio-economic processes of their communities.	Mr. Steven Bwayo Wamono Executive Director +256454436346 info@afriwyad.org
70.	Afrislum Uganda	commits its resources to serve individuals and families in the poorest urban settlements in Uganda through research, and evidence-based policy and innovations aimed at creating lasting human, social and economic change in the lives of the urban poor.	Shafiq Kawooya Founder and Team Leader +256-414673299 info@afrialum.org
71.	Agency for Community Empowerment (AFCE)	Seeks to develop capacities and capabilities of smallholder farmers in rural communities in Uganda.	Omony Patrick Project Coordinator +256773868515/+256777 630330 info@afceug.org
72.	Agripreneurship Alliance	Reaches out to emerging farmers and will be developing a programme based upon this approach that can support small-holder farmers and other rural groups 'at the bottom of the pyramid' to enhance and grow their businesses, moving away from subsistence and supporting the growth of the rural economy.	John Mugonya. Programme Manager info@theagripreneur.org
73.	Alliance for Food Sovereignty in Africa	AFSA serves as a continental platform for the consolidation of issues pertaining to food sovereignty and together marshal a single and louder voice on issues and tabling clear workable solutions.	Bridget Mugambe Programs Coordinator afsa@afsafrica.org
74.	Anthill Foundation	Empower communities living in extreme poverty with the tools to live self-sustainable and healthy lives through the promotion of innovative solutions in the areas of education, health and livelihood.	Elizabeth Kalemera National Coordinator ekalemera.anthill@gmail.com
75.	Bobo Agribusiness Institute (BAI)	Provides technical and business training and hands-on experience for graduates from Watoto in preparation for their gainful employment in Uganda's agribusiness and food sectors.	Brent Smith BAI Team leader / Director of Development & Sustainability bobiagribusiness@gmail.com
76.	Kibale Association for Rural and Environmental Development (KAFRED)	Uses ecotourism and other environmentally sustainable enterprises to promote biodiversity conservation and community development in the Bigodi Wetlands Sanctuary.	John Tinka Programs Manager tinkabigodi@gmail.com

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
77.	Caring Heart for Women and Children	Engage in skilling and training mothers especially single mothers in making crafts like bags and bangles as well as using sawing machines and hairdressing to help them generate their day-to-day income.	Madina Naluwoza Buule Initiator +256751188568 info@ch4wc.org
Private Sector			
78.	Uganda National Chamber of Commerce and Industry	Focuses on enhancing business opportunities locally, regionally, and internationally for its members.	Dr. Samson James Opolot P. O. Box 3809 Kampala, Uganda +256 753503035 info@chamberUganda.go.ug
79.	Afri Banana Products Ltd (ABP)	Up-scale innovations aimed at the improvement of entrepreneurial skills in banana value chain development among universities, business and agricultural research institutions. ABP (U) Ltd aims at commercializing agricultural technologies by working with graduates to enhance entrepreneurial and business skills through agribusiness incubator partnerships and provide a platform for sharing and up-scaling innovative outputs, experiences and practices.	Biharwe Mbarara, Kampala, Uganda · +256 704 777818 · owesi.ambrose@gmail.com www.afribanana.co.ug
80.	Renewable Energy Business Incubator	Promotes clean energy access in Uganda through our four major focus areas. We provide the following services: Nurturing Renewable Energy Business Start-ups, Provision of Business Development Services, Skills Development and Piloting renewable energy technologies.	Herbert Lwanga P. O. Box 7062, Kampala-Uganda. +256 414 667598 +256 782358522 info@energyincubator.org claire.kagga@energyincubator.org manager@energyincubator.org
81.	Uganda Manufacturers Associations	Providing products, programs and services that sustainably improve economic prosperity.	Dr. Kimani Muturi P.O. Box 6966 Kampala +256 414 221 034, 220831 membership@uma.or.ug
82.	Innovation Village	Reinventing the future by bringing together the innovation community to grow the economy and make an impact.	Mr. Musuba Michael +256 39 324 1297 info@innovationvillage.co.ug
83.	The Kampala Angel Investment Network (KAIN)	Gathers innovators, entrepreneurs, and Angels under the mutual objective of bringing IDEAS to life	Kenneth Legesi, Co-founder info@kain.co.ug
84.	Outbox Hub	Provide the entrepreneurship, innovation and technology infrastructure that supports African entrepreneurs through the growth of inclusive communities that foster talent and create value where we operate.	Richard Zulu, Team Lead +256 752624006 info@outbox.co.ug
85.	Social Innovations Academy	Transform the educational system and allowing marginalized communities to create their own solutions and social enterprises tackling root causes of social problems.	Emile Kwilyame Community of Practice Lead

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
			info@socialinnovationacademy.org
86.	Financial Sector Deepening Uganda (FSDU)	Leverages on digital finance for improved livelihoods, better well-being, and sustainable growth	Joseph Sanjula Lutwama Director of Programs +256 393 231260/2 info@fsduganda.or.ug
87.	Hive colab	Offers digital entrepreneurs access to the internet, a quiet professional working environment to develop their ideas, hold events and generally collaborate.	Barbara Birungi Director +256 (0)392 177 978 info@hivecolab.org
88.	Enterprise Uganda	Supports the government in realizing its objective of promoting the development of Small and Medium Scale Enterprises (SMEs) to become the main vehicle for expanding production, providing sustainable jobs and enhancing economic growth.	Mr. Ocici Charles P.O. Box 24581, Kampala. Uganda. +256-312-382100 +256414-251810 info@enterprise.co.ug
89.	Women in Technology Uganda (WITU)	Connects young women from underserved communities to dignified and meaningful employment and economic opportunities. We do this by offering educational programs in STEM and technology job opportunities.	Barbara B. Mutabazi Founder and CEO +256392177 980 info@witug.org
90.	KACITA Uganda	Facilitates trade, brings together the business community, and mobilize them into a viable, organized and social sustainable marketplace.	Mr. Abel Mwesigye Chief Executive Officer +256 414-237 594/ +256 781 039 451 abel.mwesigye@kacita.co.ug
91.	Airtel Uganda	A telecommunications company that provides mobile and internet services and plays a role in promoting the use of technology in various sectors in Uganda.	Allan Andrew Ssemakula Enterprise Director +256200202003 Assemakula@airtel.co.ug
92.	Umeme Limited	A private power distribution company that plays a role in promoting access to electricity and supports the growth of technology-based businesses.	Florence Nsubuga Chief Operations Officer +256772285285 callcentre@umeme.co.ug info@umeme.co.ug
93.	Uganda Clays Limited	A leading construction materials company that plays a role in promoting innovation in the construction industry.	Mr. Reuben Tumwebaze Managing Director +256 312305403 / 0392 750154 uclays@ugandaclays.co.ug
94.	BIDCO Uganda	A leading agribusiness company that plays a role in promoting innovation in agriculture through the use of modern technologies.	Odwuori Sylvester Production Supervisor +256434124200 info@bul.co.ug
95.	Uganda Breweries Limited	A leading brewery company that plays a role in promoting innovation in the manufacturing industry through the use of modern technologies.	Alvin Mbugua Managing Director +256 (0) 414311397 +256 (0) 414311000
96.	Uganda National Oil Company	A company that plays a role in promoting innovation and development of the oil and gas industry in Uganda.	Ms. Catherine Tumusiime Chief Human Resources Officer +256312444600 info.unoc@unoc.co.ug

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical address and contact information
Media			
97.	New Vision	A leading Ugandan newspaper that covers science, technology, and innovation topics.	Mrs. Kellen Owafe +256789973001
98.	NTV Uganda	A national television station that covers science, technology, and innovation topics.	Damali Mukhaye dmukhaye@ug.nationmedia.com
99.	Uganda Broadcasting Corporation (UBC)	Is a government-owned television and radio network that covers science, technology, and innovation topics.	Winston Agaba Managing Director md@ubc.ug
100.	The Observer	A Ugandan newspaper that covers science, technology, and innovation topics.	Mrs Yudaya Nangozi +256772018460
101.	Observer Media Group	Promote good governance and accountability at all levels of public and private life via enhancing the quality and credibility of national news analysis and public affairs reporting.	Robert Mukasa Editor +256712 352483 +256 783 925 564
102.	Vision Media Group	To inform, educate and entertain accurately and openly for a better world	Andrew Ndawula Kalema Editor +256772 414047 / +256 700 984963 akndawula@gmail.com

h) Zimbabwe

	Actor/ Stakeholder	Role in STI development, technological innovation, employability and job creation	Physical Address and contact information
	Government		
1.	Ministry of Education	Provides equitable, quality, inclusive, relevant and competence-driven primary, secondary and non-formal education.	Ambassador House 88 Kwame Nkurumah Avenue, Cnr Second Street +263-242 799914/704421 admin@mpose.gov.zw
2.	Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD)	Formulates and implements policies related to skills training and development and the promotion of Science, Technology and Innovation.	Government Composite Building, Block F and Block G, Cnr Samora Machel Avenue/Simon Muzenda Street, Harare, Zimbabwe +263-4-796440/9 admin@mhtestd.gov.zw
3.	Ministry of Public Service, Labour and Social Welfare,	Responsible for labour relations and welfare in Zimbabwe. Its statutory responsibility is the protection of vulnerable populations in Zimbabwe.	9th Floor, Kaguvi Building Corner S. V. Muzenda, St. & Central Ave. Harare, Zimbabwe. +263 (24) 2790871 / +263 (24) 2251288 / +263 (24) 2251022 mpslswzim@gmail.com
4.	Ministry of Industry and Commerce,	Promotes the development of vibrant, sustainable and globally competitive industrial and commercial enterprises, through the provision of enabling policy and regulatory framework.	13 th Floor Mukwati Building, Cnr. 4 th Street/Livingstone Avenue 263-4-707540/ 702737/702733/707548/7956 85/762001/700472 mic@mic.gov.zw , mic@indandcom.co.zw ; itrade@indandcom.co.zw
5.	Ministry of Finance and Economic Development	Stewards national resources, their mobilization, allocation, management and accounting for economic growth and development through the provision of sound macro-economic policies.	3 rd Floor, Block E, New Government Complex, Corner Samora Machel and Fourth Street, Harare, Zimbabwe +263 24 2794571-9 feedback@zimtreasury.gov.zw
6.	Ministry of Environment, Water and Climate	Responsible for the environment, water and climate-related issues in the country.	11 th Floor Kaguvi Building, Cnr Fourth Street, Central Avenue +263 750 409/750 360
7.	Ministry of Information Communication Technology and Courier Services	Develops appropriate policies and strategies that enhance the provision of information and communication technological innovations.	Bank Chambers Building, 76 Samora Machel Avenue, Harare; Permanent Secretary; Eng S.M. Kundishora +263712871160 04-706446 smkundishora@ictministry.gov.zw Director ICT Services: B. Chirume +263712408263 04-252318; bchirume@ictministry.gov.zw

8.	Ministry of Energy and Power Development	Provides services to the specified quality standards and within stated time limits through policies and legal framework which guide the sector for the benefit of the nation.	John Boyne Building Second Floor Corner Speke Avenue & Inez Terrace, Harare +263791760-9 moepd@energy.gov.zw
9.	Zimbabwe Energy Regulatory Authority (ZERA)	Regulates the entire energy sector in Zimbabwe in a fair, transparent, efficient and cost-effective manner for the benefit of the consumers and energy suppliers.	14 th Floor Century Towers. 45 Samora Machel Ave, Harare, Zimbabwe +263-242- 780010. WhatsApp: +263772 161 966 admin@zera.co.zw
10.	Environment Management Agency (EMA)	Responsible for ensuring the sustainable management of natural resources and protection of the environment; prevention of pollution and environmental degradation; preparation of Environmental Plans for the management and protection of the environment.	(+263)-4- 705671-3 / 705661-2, (0242) 792 772/252 087 WhatsApp: +263 779 565 707 eep@ema.co.zw , registry@ema.co.zw
11.	Centre for Education Innovation Research and Development (CEIRD)	To support the development and demonstration of technology-based products, processes and services. To create techno jobs across the economy, for graduates from all institutions of higher and tertiary learning in Zimbabwe. To provide engineering and technological solutions to industry and the community and generate income. To promote and encourage institutions of higher and tertiary education, industry and community partnerships in engineering, technology and innovation. To create an enabling environment that supports innovation and technology business enterprises and connect the Zimbabwe economy with the global innovation industry. To increase productivity through Science, Technology, Engineering and Mathematics innovation across all of Zimbabwe's productive and social sectors.	Act of Parliament passed. In process of establishment: Prof Manatsa – CEO +263773275334
12.	Standards Association of Zimbabwe	To facilitate the development and use of national standards in order to enhance Zimbabwe's competitiveness and safeguard the welfare of communities	No. 1 Northend Close, Northridge Park, Borrowdale, Box 2259 Harare, Zimbabwe.
13.	National Productivity Institute	The mandate of the NPI is to serve the interests of government, labour and business through the enhancement of productive capacity.	
14.	Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ)	Is responsible for issuing licenses in the postal and telecommunications sector. To further the advancement of technology relating to postal and telecommunication systems and services;	1008 Performance Close Mt Pleasant Business Park P.O. Box MP843 Mount Pleasant Harare, Zimbabwe +263 242 333032
15.	Industrial Development Corporation	Establishes and conducts new industries and industrial undertakings.	93 Park Lane Street, Harare +263 242 706 971-5, +263 242 250 405, +263 242 796 029
16.	Ministry of Health and Child Care	Responsible for health.	Kaguvi Building, 4 th Floor, Central Avenue +263 4 798555/60 pr.mohcc.gov.zw

17.	Zimbabwe National Statistics Agency (ZIMSTAT)	Produces official statistics at national, provincial or local level compiled and analysed according to statistical standards and procedures.	20 th Floor Kaguvi Building, Central Avenue +263-4 706681-6, 703971 info@zimstat.co.zw
18.	Infrastructure Development Bank of Zimbabwe (IDBZ)	Promotes economic development and growth, and improvement of the living standards of Zimbabweans through the development of infrastructure, which includes but is not limited to energy, transport, water and sanitation, information communication technology (ICT) and housing.	99 Gamal Abdel Nasser Rd Harare, Zimbabwe +263 4 750171-8 management@idbz.co.zw enquiries@idbz.co.zw Ms. Veronica Nonhlanhla Jakarasi - Manager – Climate Finance and Sustainability Division vjakarasi@idbz.co.zw Mr. Chrispen Maseva - Chief Environmental and Social Sustainability Expert – Climate Finance and Sustainability Division cmaseva@idbz.co.zw
19.	Zimbabwe Manpower Development Fund (ZIMDEF)	Financing the development of critical and highly skilled manpower in Zimbabwe	18572 off Mother Patrick Ave Rotten Row, Harare 0242 780 451-5/ 758 057 marketing@zimdef.co.zw
20.	Zimbabwe Council for Higher Education (ZIMCHE)	Promotes and coordinates education provided by the institutions of higher education and acts as a regulator in the determination and maintenance of teaching, examinations, academic qualifications and research standards.	21 J.M. Nkomo Road, Hatfield, Harare +263 24 2571165 info@zimche.ac.zw
21.	Zimbabwe Revenue Authority	Collects revenue facilitates trade and travel and advises the government on fiscal and economic matters and protects civic society.	Kurima House, 89 Nelson Mandela Avenue, Harare +263 4 795720-48; 781345; 770168; 798880-6 pr@zimra.co.zw
22.	ZimTrade	Works closely with privileged partners, industry experts and Development Cooperation Partners, providing a comprehensive suite of value-added services. Assists Zimbabwean exporters to develop, promote and facilitates export of their goods and services to the world.	904 Premium Close, Mount Pleasant Business Park, Harare +263 4 369330-43; +263 8677 000374 info@zimtrade.co.zw
23.	Reserve Bank of Zimbabwe	Responsible for the formulation and implementation of monetary policy, directed at ensuring low and stable inflation levels. Maintains a stable banking system.	80 Samora Machel Avenue, Harare +263 0242 703 000, +263 867 7000 477 rbzmail@rbz.co.zw ; info@rbz.co.zw
24.	Medicines Control Authority of Zimbabwe	Responsible for protecting public and animal health by ensuring that accessible medicines and allied substances and medical devices are safe, effective and of good quality through enforcement of adherence to standards by manufacturers and distributors.	106 Baines Avenue, Harare. (+263)-4 -736981-5, +263-4- 708255, +263-4-792165, +263-4-2901327 mcaz@mcaz.co.zw
25.	Competition and Tariff Commission	Implementing Zimbabwe's competition policy and executing the country's trade tariffs policy,	No. 1908 Borrowdale Road, Celestial Office Park, Unit L, Block 1, 2nd Floor

		with the primary objective of enforcing the Competition Act.	+263 4 853127-31 +2638677004897 director@competition.co.zw
26.	Zimbabwe Investment Authority	Promotes, facilitates and coordinates both foreign direct investment and local investment.	Investment House, 109 Rotten Row, Harare +263 4 757931/7; 759911/4;780140/6 info@zia.co.zw
27.	Zimbabwe Gender Commission	Promote, protect and advance gender equality.	info@zgc.co.zw +263 24225 0296/ +26324270110
28.	Zimbabwe Youth Council	Involved in youth exchanges, youth leadership workshops and youth income-generating projects. It also works on fundraising and coordination for the facilitation and strengthening of structures for youth.	+263 4 788347, +263 4 782800, +263 4 782803 info@zimbabweyouthcouncil.org
	Private Sector		
29.	Bankers' Association of Zimbabwe	Provides a forum for the consideration of matters of policy and mutual interest concerning member banks.	14177 Gunhill Avenue, Gunhill, Harare +263 4 744321/686/987 sue@baz.org.zw /info@baz.org.zw
30.	Chamber of Mines	Promoting, encouraging, protecting and fostering the mining industry and doing everything necessary and advisable for these objects.	20 Mount Pleasant Drive, Mount Pleasant, Harare, Zimbabwe +263 (4)334517/ (4)334507 info@chamines.co.zw
31.	Commercial Farmers' Union	Represents and advances the interests of professional farmers in Zimbabwe and elsewhere in Africa.	Harare Show Grounds, Belvedere, Zimbabwe +263 4 790264/74/76 dir2@cfuzim.org , reception@cfuzim.org
32.	Zimbabwe Farmers' Union	Works with different partner organizations to improve Zimbabwe's agricultural sector.	5 Van Praagh Avenue, Milton Park, Harare +263 771 564554 zfu@zfu.org.zw
33.	Confederation of Zimbabwe Industries	Represents and serves interests of members in a wide array of matters affecting their viability and competitiveness.	31 Josiah Chinamano Avenue, Harare +263 4 251490/6 czi@primenetzw.com ; patocceo@czi.co.zw
34.	Zimbabwe National Chamber of Commerce	Develops, promotes and lobbies for its membership and stakeholders without bias. Also provides services designed to support its members in business development.	5 Orkney Road, Eastlea, Harare. +263 24 770244; +263 24 2935530 info@zncc.co.zw
35.	Zimbabwe Textile Manufacturers Association (ZITMA)	Protects and promotes the interests of its members.	28A Woodholme Road Emerald Hill, Harare +263 8677 123 696 zitmasecretary@gmail.com , rdera@zitma.org.zw ,
36.	ABUZ - The Association for Business in Zimbabwe	Looks after the interests of those in business of all types in Zimbabwe.	45 Heyman Road Suburbs, Bulawayo, +26329-2231191, ceo@abuz.biz

37.	Zimbabwe Chamber of Informal Economy Associations (ZCIEA)	Represents informal Traders Associations of Zimbabwe.	7 Beal Road, Belvedere +263 242 740535 info@zciea.org.zw , zcieazim@gmail.com
38.	SME Association of Zimbabwe	Helps start-ups, small and medium-sized businesses to grow into large corporations.	6th Floor Batanai Gardens Cnr First Street/Jason Moyo Avenue, Harare, Zimbabwe +263 8644 098 517/ +263 8644 116 438/ +263 8644 214 930 WhatsApp: +263 774 371180 enquiries@smeaz.org.zw / admin@smeaz.org.zw / farai@smeaz.org.zw
39.	Employers' Confederation of Zimbabwe (EMCOZ)	Promotes and protects the interests of Zimbabwean employers and workers by lobbying the government on national policies, practices and standards on labour, employment and socio-economic issues.	21 Smit Crescent, Eastlea, Harare +263(024)2739649,2739647,2739630,2739133 emcoz@emcoz.co.zw
40.	Zimbabwe Congress of Trade Unions	Promoting, advancing, and safeguarding the economic, social and constitutional freedoms of workers.	Gorlon House, 7 Jason Moyo Avenue, Harare +263793093/794704/794742 info@zctu.co.zw
41.	National Economic Consultative Forum	Creating smart partnerships amongst key economic players, namely, government, private sector, labour, civil society, academia and other stakeholders in order to enhance the socio-economic development processes of Zimbabwe. Provides a broad participatory framework in the formulation of national economic policies through an interchange of ideas and experiences among government, private sector, labour, academia and civil society.	3rd Floor Old Reserve Bank Zimbabwe,76 Samora Machel Avenue +263 242-701092/792982 info@necf.org.zw
42.	Econet Wireless	Is a telecommunications company that has invested in technology infrastructure and services in the country.	Headquarters: No. 2 Old Mutare Road, Msasa, Harare, Zimbabwe Mailing Address: P.O Box BE 1298, Belvedere, Harare, Zimbabwe
43.	Technovation for Girls Zimbabwe	The overall goal of the competition is to encourage girls to pursue careers in technology and computer sciences.	
44.	Innscor Africa Limited	a conglomerate with interests in manufacturing, fast food, and retail.	Edward Building Corner 1st Street /Nelson Mandela Avenue Harare, Zimbabwe Postal Address Box A88 Avondale
45.	Bindura Nickel Corporation	a mining company that has invested in technology to improve mining operations and safety.	Arundel Office park Norflock road Mount pleasant PO Box 35.
46.	Bancabc Innovation hub	The Hub will provide a working space for SMEs to network, and receive mentorship and training for various business-related courses.	12 Highfield road Sourtheton Harare, Zimbabwe.
47.	Zimre Holdings	A diversified group of companies with interests in insurance, property, and engineering.	2nd Floor Smatsatsa Office Park Stand Number 10667. Borrowdale P.O. Box 4839. Harare. +263 242

			870771-5. 24061zw. zhl@zimre.co.zw
48.	Old Mutual Insurance	Through the Hub, Old Mutual will also build its product offering through partnerships with start-ups and entrepreneurs	100 The Chase Mutual Gardens Emerald Hill Harare +263 242 308 400 omsec@oldmutual.co.zw
49.	CBZ Holdings	A financial institution that has invested in technology to enhance services and operations.	3rd Floor, Union House, 60 Kwame Nkrumah, P.O. Box 3313, Harare. +263 (242) 748050-75, +263 (242) 780 880-4,
50.	Africa Institute of Biomedical Science and Technology	To discover, develop and deploy innovative healthcare solutions for Africa.	Corner R. Tangwena and Princess Road, Harare
51.	Eco Bank	Lead state-of-the-art technological innovation and modern product development at the leading pan-African banking group, recognized as a pioneer in financial integration and inclusive banking	Head Office; Box Address: P.O. Box BW1464 Borrowdale, Harare
52.	Empower Bank	The Bank strives to empower marginalised communities to come out and live in dignity and for small businesses to upscale through wealth creation to generate employment opportunities.	Number 60 West Road Strathaven, Avondale Harare
53.	Zimbabwe Women's' Microfinance	The bank specifically provides funding for women's business ventures and projects. Accessing such funding through modest loans are women cultural practitioners and artists.	56 Samora Machel Ave Harare
54.	Zimbabwe Agriculture Society	Promote agriculture and its supporting activities, to facilitate agricultural development in Zimbabwe.	Samora Machel Ave West, P O Box 442, Harare, Zimbabwe · +263 4 780 963 · marketing1@zas.co.zw
55.	Dandemutande	Internet Access Provider (IAP) that merges cutting-edge connectivity, voice, productivity, cloud and cyber security solutions with 24/7 customer support to help optimize the performance of your business.	Level 9 Pegasus House 52-54 Samora Machel Avenue CBD, P. O. Box 9, Harare, Zimbabwe; +263 4 791675
56.	Telecel	To support an array of innovative value-added services and invested substantial time and money refining its products and services to ensure they meet the diverse communication needs of the Zimbabwean market and the highest international standard.	148 Seke Road Graniteside Harare Zimbabwe
57.	LEC Biotec	Is a privately owned company created to meet the needs and demands of Schools, Medical, Research, Mining, and Industrial laboratories.	RHW2+JX2, Bulawayo, Zimbabwe +263 29 2881470
Research Institutions			
58.	Bulawayo Polytechnic	Training artisans in bricklaying, plumbing, carpentry, joinery and wood machining.	Cnr 12th Ave/Park Rd +263 9 233 181/3
59.	Gweru Polytechnic	Offering conventional courses	+ 263 0542 226719
60.	Joshua Muqabuko Nkomo Polytechnic	Offers teaching and technical courses.	A6 Gwanda, Zimbabwe +263 842 822315 info@jmnpoly.ac.zw
61.	Department of Research and Specialist Services (DRSS) Principal Director	Provide research-based technologies, technical information for advisory services and products for supporting enhanced agricultural productivity and the production of various crops	+263 242 704531/9 +263 4 706960/ 706650 pd.hq@drss.gov.zw / dhikwa@africaonline.co.zw

		and livestock (with the exception of tobacco, tea, sugarcane, pigs and forestry).	
	Department of Research and Specialist Services (DRSS) Director - Research Services Division (RSD)	Provide research-based technologies, technical information for advisory services and products for supporting enhanced agricultural productivity and the production of various crops and livestock (with the exception of tobacco, tea, sugarcane, pigs and forestry).	+263 4 706819; +263 4 704531/9 +263 4 700339 dir.rsd@drss.gov.zw ; mguni@jwayafrica.co.zw
	Department of Research and Specialist Services (DRSS) Director - Division of Crops Research (DCR)	Provide research-based technologies, technical information for advisory services and products for supporting enhanced agricultural productivity and the production of various crops and livestock (with the exception of tobacco, tea, sugarcane, pigs and forestry).	+263 4 704531/9 +263 4 790168 dir.dlr@drss.gov.zw ; jlns6@yahoo.com ; joesiks@hotmail.com
	Department of Research and Specialist Services (DRSS) Division of Livestock & Pastures Research (DLR)	Provide research-based technologies, technical information for advisory services and products for supporting enhanced agricultural productivity and the production of various crops and livestock (with the exception of tobacco, tea, sugarcane, pigs and forestry).	+263 4 704531/9 +263 4 790168 dir.dlr@drss.gov.zw ; jlns6@yahoo.com ; joesiks@hotmail.com
62.	National Institute for Health Research	Research and control of vector-borne diseases and other tropical infections, health technology development, health impact and evaluation, training, and services.	16C Josiah Tongogara/Mazowe Street, Harare. (+263)-242 -700458 or 253976/7. inforr@nihr.co.zw
63.	Medical Research Council of Zimbabwe	Provides health researchers and institutions which/in which health research is conducted, with independent ethical oversight on research conducted by those researchers or by / within those institutions.	20 Cambridge Road Avondale, Harare +(263)-242 -791792 / 791133. mrcz@mrcz.org.zw
64.	University of Zimbabwe (UZ) Faculty of Agriculture Environment and Food Systems	Teaches in areas traditionally classified as “agriculture”	+263 4) 333 880 (+263 4) 333 880 enyakudya@agric.uz.ac.zw
	University of Zimbabwe (UZ) Faculty of Business Management Sciences and Economics	Developing in-depth knowledge and cutting-edge systems for supporting new business models that respond to the national thrust on modernisation and linking the country to international markets and trade.	+263-4-303211 extension 13000 +263-4-333573 dean@commerce.uz.ac.zw
	University of Zimbabwe (UZ) Faculty of Computer Engineering Informatics and Communications	Building an understanding of computer science and providing solutions, products and services in software and hardware engineering and ICTs.	+263 242 333535 / 303211 Ext 15073/4, 18200 fmukora@ceic.uz.ac.zw
	University of Zimbabwe (UZ) Faculty of Engineering and The Built Environment	Development and implementation of innovative built environment, manufacturing and engineering designs and systems driving modernization and industrialization.	+263 242 333535 / 303211 makurira@eng.uz.ac.zw /nbspdean@eng.uz.ac.zw
	University of Zimbabwe (UZ) Faculty of Medicine and Health Sciences	Medical training	+263 24 303211 Ext: 17100 chifamba@medic.uz.ac.zw (Deputy Dean)
	University of Zimbabwe (UZ) Faculty of Science	Focuses on methods, approaches and techniques that drive cutting-edge research, new discoveries and scientific products that support the advancement of the role of science applications in technology development, agriculture, environment, engineering, health, education and training, and service industry.	+263-733412801/ +263-771674711 Sitholeidah2015@gmail.com isniangzw@yahoo.com
65.	National University of Science and Technology (NUST)	Provides an invigorating intellectual climate, which fosters an academic community where both staff and students can push back the	+263292282842 info@nust.ac.zw

		frontiers of knowledge in science and technology.	
66.	Bindura University of Science Education	Offers courses within the fields of Science, Technology, Engineering and Mathematics.	Prof. C. Mahamadi – Director Research and Innovation Department +263 66210 7531/32 courtiema@yahoo.com / info@buse.ac.zw
67.	Chinhoyi University of Technology (CUT)	Teaching, learning and research as well as community service. Lead the way in finding solutions to national problems.	(+263)-6721-22203- 5/ 67-29053-4 admissions@cut.ac.zw
	Chinhoyi University of Technology (CUT) School Agricultural Sciences and Technology	Teaching, training and technologically oriented research in Agricultural Sciences and Technology.	+263 67 21 28957 agricsciences@cut.ac.zw ; smmakuza@cut.ac.zw
	Chinhoyi University of Technology (CUT) School of Engineering Sciences and Technology	Providing Engineering Sciences and Technology Education and Research	+263 67 21 22203-5, +263 67 21 23540 sthabethe@cut.ac.zw ; jtanhara@gmail.com Director: materials@cut.ac.zw
68.	Midlands State University Gweru	Offers undergraduate and graduate programs in a variety of fields, including business, education, engineering, science, and humanities.	(+263)-054-260331, 260337, 260404. +263 54 2260359 infoandpr@staff.msu.ac.zw
69.	Lupane State University (LSU)	Conducts research and outreach activities that contribute to the development of the surrounding community. The university also plays an important role in developing the human capital and providing access to higher education for students from underprivileged backgrounds and remote areas of the country.	Along Bulawayo-Victoria Falls Highway +263 9 73770-1, 63546, 64458/ +263 (081) 2856488,2856558, 2856271, 2856390 info@lsu.ac.zw
70.	Africa University, Mutare	Has a strong focus on providing access to quality education, promoting research and innovation, and fostering a sense of community and social responsibility among its students.	(+263)-020- 60075/60026, vc@africau.edu , vcsec@africau.edu
71.	Great Zimbabwe University (GZU)	Provide our stakeholders with an enabling environment for research and empower them with entrepreneurial skills; Produce versatile graduates equipped with skills and competencies relevant to the needs of society; Attract and retain highly competent staff; Use ICT-based solutions in teaching, learning, research, administration and innovation, and; Uplift communities we serve through our involvement in their development.	P.O Box 1235 Masvingo Zimbabwe. +2638677004747 +263 39 266648/58/60/61/62/63 +263782780661 information@gzu.ac.zw https://www.gzu.ac.zw/
72.	Manicaland State University of Applied Science (MSUAS)	Provides undergraduate and post-graduate education in Applied Sciences (Engineering, Technology, Health Sciences, Mineral Sciences, Forestry Sciences, and Agricultural Sciences), Agribusiness and Tourism and Hospitality to contribute to sustainable economic development of Zimbabwe through intensive utilization of land, value addition and beneficiation of the country's mineral wealth and other natural resources.	Stair Guthrie Road P Bag 7001, Fernhill, Mutare, Zimbabwe. +2638677008730 +2632063456 pr@msuas.ac.zw https://msuas.ac.zw/
73.	Gwanda State University (GSU)	Aims at developing human resource through world-class teaching, research and innovation	P. O Box 30, Filabusi Zimbabwe; Phone Number:

		that is able to exploit factor endowment of their environment. Have programmes in mining engineering, animal science, crop science and metallurgical engineering, among others	263-84 2824720, 2824714 - 29. WhatsApp: 0781 924 111. info@gsu.ac.zw http://www.gsu.ac.zw/
74.	Women's' University	Aims to address gender disparity and foster equity in accessing tertiary education; and to work on knowledge and skills in areas of vital importance for women.	549 Arcturus Road, Harare. P.O. Box GD 32 Greendale; +26324 2459601
75.	Zimbabwe Open University (ZOU)	Is an open-distance education university in Zimbabwe. Established in 1999, ZOU is the only distance education university in the country.	836R+GH5, Alpes Rd, Harare, Zimbabwe +263 24 2770743 information@zou.ac.zw https://www.zou.ac.zw/
76.	Catholic University	It has faculties of commerce, innovation and technology; education, social sciences and humanities; and theology, ethics religion studies and philosophy	18443, Cranborne Avenue, Hatfield, Harare. +263 08688002370. info@czu.ac.zw .
77.	Reformed Church University (RCU)	Provides special needs education, theology and community service embedded in Christian values. Has faculties of education and social sciences; commerce; arts, theology, culture and heritage studies.	Reibeck Farm after Mucheke Bridge along, Bulawayo Road, P. O. Box 80 Masvingo, Zimbabwe. +263 8688002249 / info@rcu.ac.zw
78.	Zimbabwe Defence College	Has faculties, institutes and centres that include the Faculty of Social Sciences, the Faculty of Engineering, the Institute of Strategic Research and Analysis, the Science and Innovation Hub and the Centre for Defence and Security Studies, whose programmes are designed to foster creativity and entrepreneurial skills.	ict@zndu.ac.zw +2638688007001 ZNDU Rogers Nikita Mangena Barracks, Mt Pleasant Harare
79.	Solusi University	Gives special emphasis to the development of the individual's spiritual, mental, physical and social faculties. Faculties include education, humanities, agriculture sciences, health professions, business administration and theology.	P. O. Solusi Bulawayo info@solusi.ac.zw +263 292 264734 / 0772 425 011
80.	Zimbabwe Ezekiel Guti University (ZEGU)	ZEGU offers courses and programs leading to officially recognized higher education degrees in several areas of study.	Bindura, Zimbabwe +263 8 677 006 136 +263 779 279 912 Finance: 0716215465 0662106010 admin@zegu.ac.zw www.zegu.ac.zw
81.	Harare Institute of Technology (HIT)	Conducts research, designs, manufactures, develops, incubates, transfers and commercializes technology for all sectors of the economy. Produces technical human capital.	Ganges Road, Belvedere, Harare +263 242 741 422-36 communications@hit.ac.zw
82.	Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU)	Conducts needs-based and contextually relevant applied economic policy analysis, research and capacity-biding activities to promote a culture of evidence-based policy-making and implementation processes.	55 Mull Road, Belvedere Tel: +263 4 778423; 785926/7 administration@zeparu.co.zw ; chigumirag@zeparu.co.zw
83.	Research Council of Zimbabwe (RCZ)	Advising government on issues of research for sustainable development. Also provides an exceptional forum for interaction and discussion for the mutual benefit of Government, academia and industrialists.	Location: 11 Stafford Road, Mount Pleasant, Harare, Tel: +263 242 304708, 242 304787, 242 304733. secretary@rcz.ac.zw

84.	Scientific and Industrial Research and Development Center (SIRDC)	Provides technological solutions for sustainable development through reduction to practice of developed products and processes.	1547 Alpes Rd. Hatcliffe Extension, Harare Isiah Mketiwa: +263-773 738 244, imketiwa@sirdc.ac.zw Jane Mudzamiri: +263-774 057 989, jmudzamiri@sirdc.ac.zw Mavin Mutandwa: +263-733 372 939, mmutandwa@sirdc.ac.zw General lines: +263-4-861541, 860321-9 pr@sirdc.ac.zw ; tzvoma@sirdc.ac.zw ; bou@sirdc.ac.zw
85.	Tobacco Research Board	Directs, controls and carries out tobacco research in Zimbabwe.	Airport Ring Road, Harare, Zimbabwe +263 (0)86 8800 2604 tobres@kutsaga.co.zw Mavis Chakachiranje - Business Development Manager.
Non-governmental Organizations (NGOs)/CSOs			
86.	Standards Association of Zimbabwe	Provides information services on national, foreign national, regional and international standards.	1 Northend Close, Borrowdale Harare +263 4 885511/2/8 marketing@saz.org.zw / info@saz.org.zw
87.	Zimbabwe Christian Youth in Action (ZICYA)	Stands as a representative of the church in the nation to implement development and empowerment of young people in a Christian perspective to create a great youth generation in the fear of God.	+263 713 308601
88.	Women Alliance of Business Associations in Zimbabwe (WABAZ)	Supports women in business organizations to speak with a unified voice on issues that affect women entrepreneurs, advocating through collective action for policy reforms, and encouraging greater grassroots participation in strengthening economic democracy.	wabaz@zncc.co.zw
89.	Women in Communities (WICO)	Uphold women's rights, health and livelihoods. It seeks to create safe spaces for women to participate in governance processes and exercise their constitutional rights.	30 Lalbagh Avenue, Ridgemont, Gweru +263 772 358 569 / +263 772 624 295 / +263 773 444 647 / +263 773 427 749 wicozimbabwe@gmail.com ; info@wico.org.zw
90.	Women's Action Group (WAG)	To champion women's rights in Zimbabwe.	No. 11, Lincoln Road Avondale, Harare wag@wag.org.zw
91.	Zimbabwe Women's Resource Centre and Network (ZWRCN)	Promoting women's social and economic justice in Zimbabwe and globally, through the power of information, networking, and strategic advocacy.	288 Herbert Chitepo Avenue Cnr 7 th Street, Harare +263 242 252 389 support@zwrcn.org.zw
92.	International Labour Organization (ILO)	Promoting jobs, guaranteeing rights at work, extending social protection and promoting social dialogue.	Block 8, Arundel Office Park, Norfolk Road, Mt Pleasant

			P.O. Box 210, Harare, Zimbabwe +263-242-369805/12 harare@ilo.org
93.	Stichting Nederlandse Vrijwilligers (Foundation of Netherlands Volunteers) (SNV)	Aims to strengthen capacities and catalyse partnerships that can transform the agri-food, energy, and water systems. Promotes gender equality and social inclusion, facilitating climate adaptation and mitigation, and strengthening institutions and effective governance. Helps raise the incomes of people living in poverty.	14 Natal Road, Belgravia P.O Box CY156, Causeway, Harare, Zimbabwe +263 242 707750 zimbabwe@snv.org
94.	World Vision	World Vision continues to pioneer new humanitarian responses using technology, including its flagship Last Mile Mobile Solutions (LMMS) platform for beneficiary registration and aid distributions.	59 Joseph Road/Off Nursery Road, Mount Pleasant, Harare TALK TO US P.O. Box 2420 / P.O. Box 3576 Harare, Zimbabwe.
95.	Plan International	Ensuring children, especially girls, access quality and inclusive basic education; Supporting young people to break the cycle of poverty by learning the skills.	Lezard Avenue, Milton Park, Harare, Zimbabwe Private Bag HG 7232.
96.	Practical Action	concentrating our efforts in Zimbabwe on helping people harness the transformational power of clean, affordable energy and to reduce avoidable deaths	Tel: +263 4 776 6313. 4 Ludlow Road, Newlands, Harare, Zimbabwe
97.	Elevate trust	Youth leadership and development trust Creating programs that facilitate youth development in innovation, entrepreneurship and careers, under the universal theme, "STEM Pays."	40 Sims Road, Mount Pleasant, 00263 Harare, Zimbabwe.
98.	Silveira House	Keeping people at the center of project interventions, this project fosters innovation and learning through action research and knowledge exchange.	545 Arcturus Road, Chishawasha, Harare.
99.	International Confederation of Catholic Organizations for Charitable and Social Action (CARITAS)	Local autonomy is paramount in ensuring effective teamwork for the good of all. By pooling expertise and resources.	Africa Synod House, 29/31, Selous Avenue, Harare, Zimbabwe
100.	Youth Empowerment and Transformation Trust (YETT)	Youth networking organization committed to the full participation of young people in sustainable development through advocacy and capacity.	7 Capri Road, Highlands, Harare; +263 775 320 238; +263 (242) 496 889; info@yetzw.net
101.	Campaign for Female Education (CAMFED)	Support girls to go to school, learn, thrive, and become leaders and change-makers in their communities. Recognized as leaders in the use of technology and impact data to inform girls' education programmes.	No. 26 Campbell Avenue, Pomona, PO Box 4104 Harare, Zimbabwe. +263 4 886 676 / 677 / 678 zimbabwe@camfed.org
102.	UN-Food and Agriculture Organization (FAO)	Integrating STI to provide solutions for increasing food productivity while building resilience to climate change and protecting natural resources, enhancing access to safe food and clean water and energy, improving livelihoods and supporting human, animal, plant and planetary health.	Block 1, Tendeseka Office Park, Corner Samora Machel Avenue & Renfrew Road, Eastlea, Harare, Zimbabwe
103.	USAID	Supports Zimbabwe to strengthen health services, increase food security, support economic resilience, and promote democratic governance. Seeks to increase the application of	2 Lorraine Drive Westgate, Harare Zimbabwe. www.usaid.gov/zimbabwe sschasberger@usaid.gov

		science, technology, innovation and partnerships (STIP) to achieve, sustain and extend the Agency's development.	Contracting Officer +263-8677011000
104.	UNESCO	Promotes knowledge sharing and the free flow of ideas to accelerate mutual understanding and a more perfect knowledge of each other's lives. UNESCO's programmes contribute to the achievement of the Sustainable Development Goals defined in the 2030 Agenda.	Floor Block F, New Government Complex Cnr. Samora Machel Avenue / S. Muzenda Street P. Bag CY 7732 Harare Zimbabwe +263-4-732726
105.	United Nations Development Programme (UNDP)	To eradicate poverty while protecting the planet. Help countries develop strong policies, skills, partnerships and institutions so they can sustain their progress.	Block 10, Arundel Office Park, Norfolk Road, Mount Pleasant, Harare, Zimbabwe. +263 242 33 88 36 - 44, +263 772 134068-9 registry.zw@undp.org
106.	African Development Bank (AfDB)	Creating the country's own technology hub and promoting local budding innovators.	Ground Floor, Arundel Office Park, 107 Norfolk Road, Mount Pleasant, Harare, Zimbabwe Office. (+263) 782 784 544-6
107.	OXFAM International	Addresses poverty in Zimbabwe by working with local leaders to deliver clean water and food to citizens in need. In emergencies, Oxfam provides cash transfers so that people can purchase food according to their needs and preferences.	13 Brigadier Atif Road, Mt. Pleasant, +263 Harare, Zimbabwe.
108.	European Union (EU)	Aims to preserve the country's democracy, bring stability, and build resilience to build a strong basis for inclusive and sustainable growth.	1 Norfolk Road, Mt Pleasant 242 338 158 - 164 and 772 568 980 delegation-zimbabwe-hod@eeas.europa.eu

Annex 2: List of respondents

A. ETHIOPIA

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1.	Mr. Desta Abera	Ministry of Innovation and Technology	✓	✓	Desta.abera2001@yahoo.com Tel: +251-912183844
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24.	Tadesse Getachew	Addis Ababa University		✓	tadessegetm@yahoo.com

25.	Kalkidan Teshome	Ethiopian Broadcasting Corporation		✓	Kalteshome78@gmail.com / kalteshome78@gmail.com
26.	Hermela G/Egziabher	Ethiopian Youth Entrepreneurs Association		✓	her21gegziabher@gmail.com
27.	Babesha Kenaw	Ministry of Innovation and Technology		✓	Email: bkenaw@gmail.com
28.	Eyob Esatu	Organization for Innovation and Sustainable Development		✓	Email: esatue@yahoo.com
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B. GHANA

S/N	NAME	INSTITUTION	KII	FGD	CONTACT DETAILS
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25.	Hanz Ablosh	Ministry of Energy		✓	abloshhanz1@gmail.com Tel: +233 551372430
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27.	Fredrick Amu-Mensah	African Technology Policy Studies Network -Ghana		✓	Email: obeyie@gmail.com Tel: +233 244743197
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C. KENYA

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5.	Dr. Roselida Owuor	Ministry of Education	✓	✓	Email: roselidaowuor@yahoo.com Tel: +254 721453005
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7.	Beatrice Githire	Kamata Music School	✓	✓	Email: teacherbeatricewangui@gmail.com Tel: +254 723335686
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D. NIGERIA

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Annex 3: Data Collection tools



KEY INFORMANT INTERVIEW/ ONLINE SURVEY TOOL

Stakeholder Mapping and Analysis

The African Technology Policy Studies Network (ATPS) is conducting a study on the role of STI in technological innovation, job creation, skills development for employability and entrepreneurship. This study aims to map out institutions responsible for STI to understand the roles, linkages, powers and influence in the promotion of STI development for technological innovations, skills development for employability, job creation and entrepreneurship in the target countries.

To achieve the stated objectives, information will be sought from policymakers (governments), research organizations, private sector actors, civil society and the media fraternity. The information obtained will be used to inform policy changes that support the development and sustainability of STI in Africa. Filling out this questionnaire will take about 20-30 minutes. All the data and entries of the respondent will be anonymized in the analysis and project publications. Respondents will however be included in the distribution lists for final project outputs and knowledge products.

1. Introduction

Date [Click here to enter text.](#)

Respondent specific details

- 1.1. Name of the respondent: [Click here to enter text.](#)
- 1.2. Phone number: [Click here to enter text.](#)
- 1.3. Email address: [Click here to enter text.](#)
- 1.4. Gender: Male Female Other _____
- 1.5. Age: (Tick appropriately)
18-35 36-45 46-55 56 and above
- 1.6. Name of the organization you work in: [Click here to enter text.](#)
- 1.7. Designation: [Click here to enter text.](#)
- 1.8. The number of years worked in the organization: [Click here to enter text.](#)
- 1.9. Country: [Click here to enter text.](#)
- 1.10. In which sector(s) does your organization identify with or work within:
 - a. Agriculture
 - b. Environment and natural resources
 - c. Energy
 - d. Science, Technology and Innovation
 - e. Trade and Industry
 - f. Other (please specify): [Click here to enter text.](#)

- 1.11. Category of organization/respondent
- a. Government (Ministry, Department or Agency)
 - b. Research institution
 - c. Non-Governmental Organization/Civil Society Organization
 - d. Private Sector
 - e. Media
 - f. Development Partner/Donor Agency
 - g. Any other (please specify): [Click here to enter text.](#)

2. Stakeholder identification and categorization

(This section aims to identify all stakeholders in STI in this continent, region and target countries and categorize them- Government, Private Sector, Civil Society/CBOs/NGOs/FBOs, Research Organizations, Media etc.)

2.1 Are you aware of any key actors/stakeholders in the STI sector in your country and region?

Yes No

2.1.1 If Yes (*in question 2.1 above*), kindly list them, their contact details and their broad categorization (Government, Private Sector, Civil Society/CBOs/NGOs/FBOs, Research Organizations, Media etc.)

	Name of Actor	Contact details	Stakeholder category
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

3. Stakeholders' roles in STI implementation in enhancing technological innovation, skills development for employability, job creation and entrepreneurship

(This section aims to enumerate all the roles played by each STI stakeholder identified in question 2.1.1 above, as relates to technological innovation, skills development for employability, job creation and entrepreneurship, as well as the ones they ought to play but do not and why)

3.1 For each STI actor/ stakeholder identified (*in question 2.1.1 above*), give a brief explanation of the specific role they play in promoting technological innovation, skills development for employability, job creation and entrepreneurship in the continent, region and country.

[Click here to enter text.](#)

3.2 Other than the roles listed above (*in question 3.1*), are there other STI-related roles which the stakeholder(s) have the capacity/mandate to undertake in promoting technological innovation, skills development for employability, job creation and entrepreneurship but currently they do not?

Yes No

3.2.1 If Yes (*in question 3.2 above*), kindly list them

[Click here to enter text.](#)

3.2.2 If Yes (*in question 3.2 above*), in your opinion, what are the likely reasons why the stakeholder (s) do not undertake the above-stated roles?

[Click here to enter text.](#)

4. Stakeholders linkages

(This section aims to determine whether the STI actors/stakeholders have formal connection channels in enhancing technological innovation, skills development for employability, job creation and entrepreneurship.)

4.1 Are there any linkages or formal connection channels between STI stakeholders or actors involved in technological innovation, skills development for employability, job creation and entrepreneurship in the continent, region and country?

Yes No

4.1.1 If Yes (*in question 4.1 above*), kindly list and explain them.

[Click here to enter text.](#)

4.2 In your opinion, are there any benefits of establishing linkages among STI stakeholders/actors to enhance technological innovation, skills development for employability, job creation and entrepreneurship?

Yes No

4.2.1 If Yes (*in question 4.2 above*), kindly explain briefly

[Click here to enter text.](#)

4.2.2 What factors contribute to stronger linkages amongst STI stakeholders in your country?

[Click here to enter text.](#)

4.2.3 How will you rate the STI stakeholder linkages in relation to enhancing technological innovation, skills development for employability, job creation and entrepreneurship?

Very strong Strong Weak Very Weak

4.3 What factors contribute to stronger linkages amongst STI stakeholders in your country?

4.3.1 What do you think should be done to strengthen STI stakeholder linkages in your country?

5. Stakeholders' level of power in STI implementation

(This section aims to ascertain the stakeholders' levels of power in promoting technological innovation, skills development for employability, job creation and entrepreneurship in the continent, region and country)

5.1 For each STI actor/stakeholder identified, state their level of power in promoting technological innovation, skills development for employability, job creation and entrepreneurship. In the scale of 1 to 5, where 5 is the most powerful and 1 is the least powerful (*please check appropriately*)

Stakeholder/actor name	Level of power				
	1 (Least powerful)	2	3	4	5 (Most powerful)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Stakeholders' level of influence in STI implementation

(This section aims to determine the stakeholders' influential capacities in promoting technological innovation, skills development for employability, job creation and entrepreneurship in the continent, region and country)

6.1 For each STI actor/stakeholder identified, state their level of influence in promoting technological innovation, skills development for employability, job creation and entrepreneurship. In a scale of 1 to 5, where 5 is the most influential and 1 is the least influential *(please check appropriately)*

Name of stakeholder/actor	Level of influence				
	1 (Least influential)	2	3	4	5 (Most influential)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.2 In your opinion, are there any achievements made so far by these institutions and actors in promoting STI development for technological innovation, skills development for employability, job creation and entrepreneurship in your country? Yes No

6.2.1. If Yes, please list and explain them

[Click here to enter text.](#)

6.2.2 If No, please explain why?

[Click here to enter text.](#)

6.3 For the sustainability of STI development in your country, what institutional amendments/changes would you propose?

[Click here to enter text.](#)

6.4 Do you have any additional information you wish to share with us regarding the role of STI stakeholders in technological innovation, skills development for employability, job creation and entrepreneurship?

[Click here to enter text.](#)