African Union

NEPAD
TRANSFORMING AFRICA

Toolkit on

Agricultural Technical Vocational Education and Training (ATVET)

Series 1

Stakeholder Engagement & Curriculum Development

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1.1 Background and context

The world's population is growing rapidly, particularly in sub-Saharan Africa where young people between the ages of 15 and 24 constitute at least 20 per cent of the total population and will continue to increase by 42 per cent until 2030. Employable skills remain a huge challenge on the continent. About half of the 10 million graduates churned out by 668 African universities annually do not find employment. Yet studies show that one of the greatest challenges faced by agro-processing firms and commercial agriculture is the lack of a skilled workforce. (UNDP, 2012).

The AUDA-NEPAD fosters socio-economic transformation on the continent by supporting Regional Economic Communities, Member States and civil society to respond to the priorities of Africa's development strategies. In the context of youth development and empowerment, AUDA-NEPAD's strategic goal is to provide enabling and catalytic support to Member States in their policies, strategies and development programmes to attain the goals and targets aligned to the Agenda 2063. The AUDA-NEPAD plays a key role in forging strategic orientation, leadership and partnerships with stakeholders to mobilize both technical and human resources needed to meet the continent's aspirations. This calls for the creation of knowledge, benchmarking of best practices, identifying of scenarios to operationalize national and sub-regional action plans, and the posing of questions that policymakers should take into consideration for skills development and job creation.

As the blueprint for Africa's development, Agenda 2063 articulates the continent's aspirations. These include a desire for prosperity based on inclusive growth and sustainable development, for development to be people-driven, and to be a continent where women and youth can realise their full potential. The strategic framework recognizes young people and youth participation and empowerment as a key driver, an important resource and a critical enabler for Africa's transformation. Therefore the attainment of Agenda 2063 hinges, in part, on youth empowerment and skills development.

The continental Technical and Vocational Education and Training (TVET) strategy and its implementation plan are also clear on the need to support young people to acquire professional skills through TVET programmes. Its mission is to position TVET within the education system as a tool for the empowerment of African people and as a culmination of the training needed for socio-economic development. The strategy focuses on an approach that promotes entrepreneurship to enable youth and adults to benefit from employment opportunities that offer a job and a decent income.

1.2 AUDA-NEPAD context

The task of arming young people with skills and creating jobs for them is made up of two elements. The supply side is that of Human Capital Development and involves education, training and skills development. The demand side requires the creation of an Enabling Business Environment in order to absorb young people through private sector-led economic growth, and improved access to resources such as land, finance and markets. This in turn must be supported by enabling policies that encourage youth and agriculture initiatives.

The Skills and Employment for Youth (SEFY) programme supports the AUDA-NEPAD's programme to equip young people with skills, citing this as a prerequisite for effective engagement in all sectors of the economy and the world of work. The programme focuses on supporting young people to become entrepreneurs and to gain valuable marketable skills that will enable them to be employed.

The Malabo Declaration on the Comprehensive Africa Agriculture Development Program (CAADP) and its commitment to accelerate agricultural growth and transformation for shared prosperity and improved livelihoods[1] for Africa has been explicit on the need to create opportunities for the youth and women to participate in and benefit from agribusiness for income and prosperity along value chains. This is expressed in its commitment to halving poverty by 2025 through inclusive agricultural growth and transformation by:

i.   Sustaining annual growth in agricultural GDP by at least six per cent.

ii. Establishing and/or strengthening inclusive public-private partnerships in at least five priority agricultural commodity value chains with strong linkage to smallholder agriculture.

iii. Creating job opportunities for at least 30 per cent

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1   Assembly/AU/Decl.1 (XXIII). Note that the goals are referred to as "commitments" in the Malabo Declaration

of the youth in agricultural value chains.

iv. Preferential entry and participation by women and youth in gainful and attractive agribusiness.

In response to this, the Agriculture Technical and Vocational Education and Training (ATVET) project builds on skills development and the improvement of the educational sector, especially in vocational and technical education, with an emphasis on entrepreneurship to prepare young people to be profitably self-employed in agricultural value chains.

The Malabo Implementation Strategy and Roadmap[2] outlines different sets of strategic actions that together aim to achieve the change required to attain the 2025 vision for Africa's agricultural sector. Its Strategic Action Area 2d calls for the enhancement of skills, knowledge and agricultural education, including through the development of innovative ways and incentives to increase youth enrolment in agricultural disciplines in vocational and tertiary education. This, it says, could be achieved through exciting agribusiness training programmes and by equipping value chain actors with entrepreneurship skills through targeted capacity building programmes. The ATVET project is the AUDA-NEPAD flagship programme supporting the improvement of vocational education and entrepreneurship in the agricultural sector to achieve the Malabo objectives.

A key feature is its support of the elaboration and mainstreaming of agriculture skills development into national development agendas through:

• Promoting holistic reforms in the TVET sector by bringing agriculture into umbrella TVET systems

• Promoting entrepreneurship and employability for the youth

• Facilitating policy dialogue amongst stakeholders and advocacy on the challenges faced by young people in attaining skills and becoming job ready
It has also focused on an innovative approach to developing curriculum along agricultural value chains with the competence-based methodology (CBT) concept delivered in formal, non-formal and informal systems.

It is with this in mind that this set of tools has been developed based on the ATVET and ATVET for Women project implementation approach as an

instrument to upscale the ATVET model in African Union (AU) Member States. The toolkit is one of the instruments that will be used to mainstream the programme into national level development priorities and processes.

1.3 CAADP ATVET project

The AUDA-NEPAD has been implementing the ATVET project as a model for agriculture, education and skills improvement in Africa within the context of Agenda 2063 and CAADP in six countries as an innovative pilot programme to improve the skills of youth, women and farmers for agriculture productivity and job creation. The project is supported by the German development agency, Deutsche Gesellschaft

für Internationale Zusammenarbeit (GIZ), through the GIZ CAADP Support Programme commissioned by Germany's Federal Ministry for Economic Cooperation and Development. In 2017, the project was upscaled to six countries with an additional module called "Women in ATVET" which focuses on developing the skills of women, particularly in the agricultural sector.

Both CAADP-ATVET projects focus on developing the capacity of youth, women and farmers to access labour-market oriented and income-enhancing (entrepreneurial) opportunities in the agro-food sector. They also help African Member States to design approaches, tools and implementation instruments that will assist in meeting the Malabo commitment's goal of halving poverty by 2025 through inclusive agricultural growth and transformation, especially by:

- Creating job opportunities for at least 30% of the youth in agricultural value chains

- Creating preferential entry and participation by women and youth in gainful and attractive agribusiness

The projects have focused on innovative approaches to developing curriculum along agricultural value chains with the competency-based training concept (CBT) delivered in formal, non-formal and informal systems. It has also supported mainstreaming agriculture in the overall TVET system in the six initial countries. AUDA-NEPAD is upscaling the project to an additional six countries and subsequently to the rest of the AU Member States. It is to this purpose that the toolkit for the CAADP ATVET and ATVET for Women model are being developed to guide AU Member States and other key stakeholders in the upscaling of the CAADP ATVET Model.

The CAADP ATVET Model blueprint of implementation involves supporting the building of capacity in actors and stakeholders including ministries of agriculture, education and labour, TVET authorities, agriculture training colleges (ATCs), private sector employers and trainers, farmers and value chain actors, and women and young people. This is done through a systems approach of integrating ATVET into national policies and strategies, mainstreaming agriculture in national TVET systems, building the capacity of ATCs to design and implement competence-based curriculum along agriculture value chains, and linking trainers and trainees to the private sector through industrial placements, attachments and other practical approaches to facilitate hands-on training. The emphasis of training delivery has been on agripreneurship.

1.3.1   CAADP ATVET implementation results (2013-2016)

Burkina Faso
Rice, Sesame & Ceshew

Kenya
Dairy, Horticulture & Aquaculture

Ghana
Pineapple & Citrus

Malawi
Mango, Pineapple & Aquaculture

Togo
Rice & Aquaculture

Benin
Meat & Rice
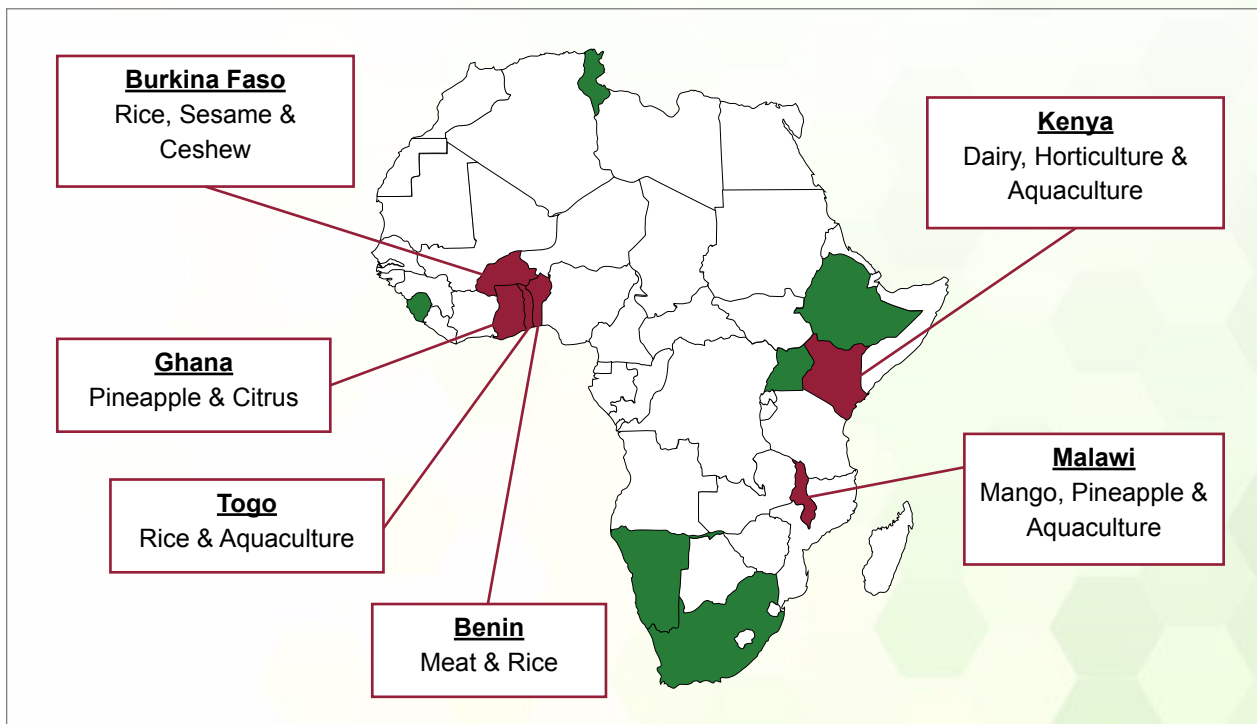
Figure 1:   CAADP-ATVET implementing countries and their selected value chains

1.3.2   Implementation results (2012-2016) in six countries

The following results have been recorded:

Target Area	Results (6 countries)
Curricula developed (training modules based on occupations identified)	229
Youth trained	2,523
Farmers trained	4,289
Women trained	3,052
Teachers trained	967

1.4   Why a toolkit?

Africa's challenge of a youth bulge and rising unemployment can only be solved through the creation of sustainable jobs in sectors that are thriving and important to the continent's development and growth. Agriculture offers the biggest opportunity to employ young people and therefore much emphasis should be placed on ensuring that, through skills development and training, they have greater access to employment in the sector. The CAADP-ATVET project encourages the development of private sector demand-driven training in value chains and skills that are required in a growing workforce. The ATVET project has been piloted in six African countries, but in order for it to be rolled out to all 54 AU Member States, a set of tools needs to be developed to guide new participants' on how to implement ATVET.

The toolkit has been developed as an instrument of change, to support the upscaling and implementation of the ATVET model in Africa and to be use by policymakers, development partners, heads of agriculture training institutions and private sector players in the agriculture sector. The document provides an overview of the relevant tools, processes and methodologies of the ATVET model. It shows how the six initial partner countries have implemented the method and highlights the results and lessons emerging from over five years of the its implementation.

The document has been divided into clusters in which topics and tools that are part of a single process have been grouped together for ease of use. Some of the tools are simple to apply while others are quite complex and require experts in the subject matter to implement them. Each tool is arranged around similar sub-headings:

• Background

• Problem

• Proposed solution (proven and applied in the partner countries)

• Expected benefits

• Prerequisites

• Challenges

• Implementation steps

• Required investment to effect solution

• Case study (example of a good practice from one of the ATVET partner countries)

WHY?

Support the formulation of coherent policy frameworks for education especially at the TVET level

WHAT?	HOW?	BY WHOM?
Provide a framework for inclusion and strengthened capacity of women and youth in agribusiness value chains	**Guide the development and implementation of market-orientated and competency-based technical vocational training measures at national level**	**The toolkit is relevant for ministries, TVET authorities, gender/ women groups, professional associations, training centres, private sector involved in implementing reforms of ATVET systems in Africa.**

The topics to be covered in the toolkits are as follows:

- **Toolkit 1:**
  - Stakeholder engagement
  - Curriculum development using the CBET approach

- **Toolkit 2:**
  - Roles and responsibilities of agricultural training centres (ATC's)
  - Post-training support and impact analysis
  - Needs assessment and capacity development analysis
  - Private sector engagement

- **Toolkit 3:**
  - Women inclusion in ATVET delivery (Women in ATVET)

- Systems intervention (mainstreaming agriculture in national TVET systems)

1.4.1   Process for the toolkit development

In preparation of this toolkit, the AUDA-NEPAD with support from GIZ organized a series of "writeshops" and gathered knowledge from industry experts (heads of selected public and private ATCs, subject matter experts from partner countries, key technical officers from TVET institutions and ministries of agriculture/education, private sector players, and value chain actors who have been involved in the project implementation across 6 African countries. This document is the outcome of consultations with stakeholders who were involved in the implementation phase in the 6 partner countries.

Approach and participants for developing the toolkit

30 experts assembled from 12 countries meeting in Kigali Rwanda for 1 week

Experts in:

- TVET reforms and management
- National ATVET coordination
- Knowledge management
- Continental policies
- ATVET institution management
- Accreditation and certification
- Participants from private companies

Approach:

- Presentations on experiences
- Group work on various topics
- Sharing of lessons
- Field visits to training centres
- Open discussions among participants
- Interactive, constructive

Funded and organised by GIZ/AUDA-NEPAD

1.4.2   Organization of the toolkit

There were several strategic interventions identified during the implementation of the ATVET project and this informed the key topics under which the tools are being developed. The toolkit is therefore being developed in phases with this one looking at:

•   Stakeholder engagement

The toolkit ends with a glossary of terms that are commonly used in the ATVET model.

Need for ATVET reforms 1

Stakeholder engagement process in ATVET model 2

Competency-based concept 3

Competency based Approach 4

Glossary of terms used in the ATVET model 5

2
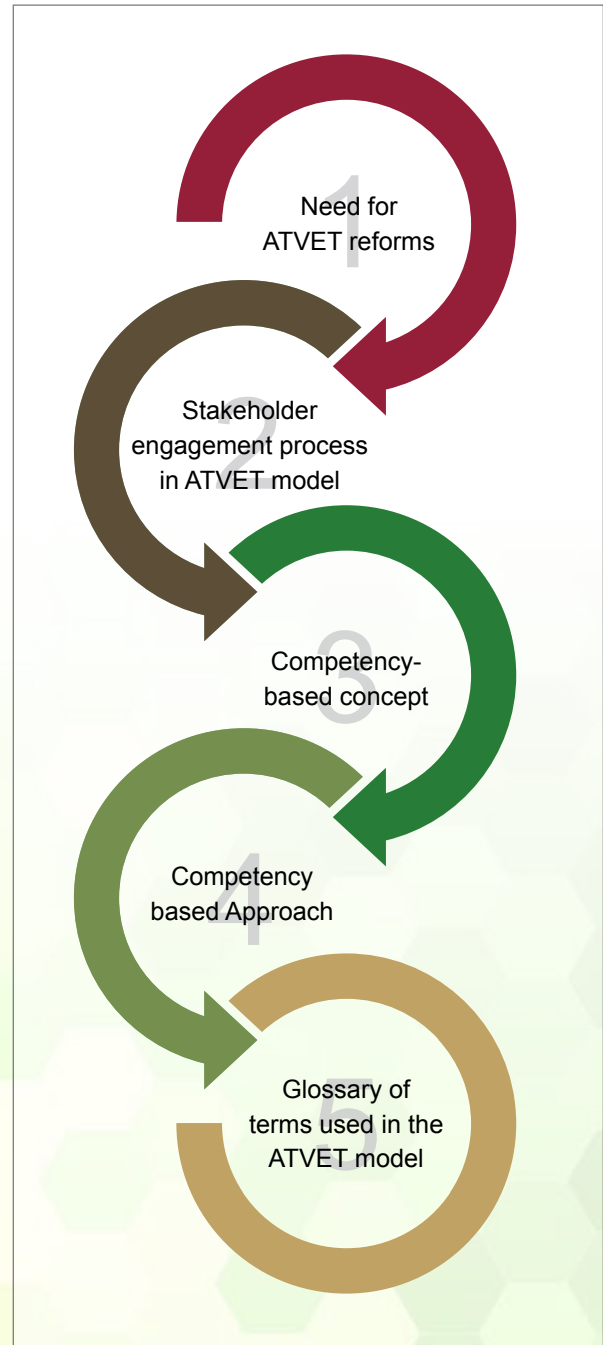
Understanding ATVET reforms and transformation in Africa

2.1   Current challenges

Education, skills development and technical training are central to agricultural production and rural employment in Africa. It is widely recognised that there is an urgent need for faster and more sustainable African agricultural growth to create jobs, generate income and guarantee food security, especially along agricultural value chains as indicated in the Malabo Declaration, in order to meet Agenda 2063 (see note) and sustainable growth targets. Recent trends in African agricultural growth are positive. Sustaining this depends not only on direct factors that affect agricultural productivity, but also on institutional capacity to design and implement programmes and policies, and on human capacity building along entire value chains.

Agricultural education and training historically had facilitated growth in the sector, producing extension officers and hands-on technicians to support the production capacities of farmers and other value chain actors. However, from the mid-1990s to the early -2000's the value of ATVET was greatly neglected. This is especially true in rural areas where ATVET could have significant impacted on the lives of the poor by enhancing agricultural skills for productivity. Agricultural training in Africa is therefore out of date and not adapted to current market needs and conditions.

Prior to the implementation of the ATVET model, the following challenges were identified through comprehensive stocktaking studies conducted in Africa.

- In most countries, agricultural technical and vocational training are not usually included in the overall TVET systems.

- TVET reforms often do not include measures on reform of TVET in agriculture.

- TVET training is mostly based on master craftsperson-apprenticeship relations.

- Master farmers are not available and do not naturally play a role in agricultural skills training.

- Agricultural Training Colleges (ATCs) deliver technical skills training mostly on a theoretical basis with little or no practical experiences. Hence learners are not able to convert their competencies to become employable or self-employed.

- There is a limited alignment of national development visions to skills development, especially in the agriculture sector.

- Most national agriculture investment plans do not adequately address investment in agriculture training and skills development.

- Technical and vocational training delivery is fragmented and does not meet the needs of the rapidly growing agricultural and food sector.

- Weakness in development of private training institutions.

- Poor linkage with private sector in curriculum development, training planning, delivery and trainee monitoring.

In general, ATVET in Africa is fragmented and in many countries is not integrated into an overall TVET system, is given low importance by governments, and lacks sufficient financing. In addition, the demands and needs of the private sector are not identified and in general, it is not considered an important stakeholder. Considering the fact that more and more farmers

and youth are being integrated into agriculture value chains, the interaction and synergies from both public and private employers and service providers would give a greater scope for the expansion of ATVET and an increased responsiveness to the system to provide the needed skills for the modernization of the sector.

2.2 Desirable approach to ATVET reforms

In order to sufficiently develop skills in agriculture to meet the demands of the sector in a sustainable way, the following goals have been identified as a foundation for implementation:

- Make skills respond to agriculture and agro-industry market needs

- Support the modernization of agriculture and make it attractive to the youth and women

- Make agriculture a profitable business and support the commercialization of the sector

- Create employment opportunities for young people and women

- Promote decent employment for rural youth, as agripreneurs and agribusiness specialist

In order to achieve the change required, the system itself must have the following functional elements and supporting structures.

2.3 Recommended action for ATVET reforms and development in Africa

Taking the identified problems of the existing ATVET systems in African countries into consideration, comprehensive efforts will be needed to develop ATVET into a demand-driven system combining education, training, knowledge development, and skill-enhancing techniques, integrated into the countries' general TVET systems and bringing together public and private players.

It is therefore important to:

- Develop new and innovative models to incorporate agriculture into existing ATVET or to generate new institutions for agriculture.

- Recognise the need for development of the professional and vocational capacity as a cross-cutting strategy under the CAADP process. At regional and continental level, efforts to mainstream ATVET and exchange good practice

Organisational Development of ATCs	Human Resource Development	System Improvements	Cooperation and Network Development
HCD Measures for Institutions	Formal, Informal and Non-Formal Training Measures	Mainstreaming ATVET in TVET Systems	Cooperation among Regional Educational Networks
Competence Training Methodology (CBT)	Technical Skills	ATVET in NQF for certification	Network Trianing Providers to the Private Sector
New Curriculum Along the Value Chain	Vocational and Business Skills	Standardisation of Modular Training and Apprenticeship	Linking Training Providers to the Private Sector
			Cooperation Along the Value Chain

Figure 2:   Four dimensions of ATVET reform in Africa

examples should be established within the CAADP mechanism.

- Develop legislative frameworks ensuring and supporting National Qualification Frameworks (NQFs).

- Develop appropriate M&E systems to trace the impact of ATVET with regards to the employability of graduates.

- Develop and support new partnership approaches as tested in some value chain programmes.

- Install incentives that encourage private sector participation in ATVET skills development.

- Modernize existing facilities to cope with emerging innovations in training delivery.

- Support linkages between public and private initiatives among research, universities and ATVET institutions.

- Support the role of farmer organizations in assessing training needs and compiling overviews of available training institutions, as well as to lobby for improved or changed curricula and for demand-driven training courses in their country or region.

- Revisit and adopt models that have proved to be effective in generating vocational and professional capacity in other regions or countries (for example

the German dual system of agricultural education with three years of practical-theory mix).

- Transform the ATVET system into "agri-business" or "entrepreneurial" training that attracts more young people and produces better farmers.

On the policy side, four priority areas which need more attention for further improvement of ATVET have been identified:

- Existence of a functional National Qualification Framework (NQF)

- Financing of ATVET in NAIP's

- Integration of non-formal and informal training into formal ATVET

- Flexible mode of delivery and modularisation

The following is a summary of important issues raised by young African students and farmers, in various studies and interviews, for ATVET to reach youth and women:

- Education and capacity-building programmes for rural youth (women and men) must be defined in a more participatory way and focus on agricultural best practices and knowledge sharing.

- Youth platforms (rural youth and young farmer's platforms and councils) must be created to

determine training and capacity building needs.

- Training in leadership and lobbying should be implemented for rural youth.

- Sensitisation programmes for rural youth on their rights should be put in place.

- The use of innovative information and communication technologies (ICTs) should be promoted and provided to rural youth.

- Women and men have equal access to training and education. Gender aspects must be taken into consideration when deciding the themes and setting the timing of the training.

- Governments need to earmark and decentralise a significant part of their budget to the agricultural sector, of which at least five per cent should be allocated to agricultural activities for rural youth and young women.

- Governments and development partners must put the needs and preoccupations of rural youth at the centre of their development policies. This should be done in a participatory manner with the rural youth involvement.

- Farmer organizations and rural youth sections within national, regional and continental platforms should be put into place.

2.4 Required implementation steps

1 Secure national commitment for reforms

2 Ensure ATVET is included in national agricultural investment programmes, national Tech Voc Education Training Qualification framework, approving structures

3 Adopt the CBT reforms so as to improve curriculum and assessment practices

4 Upgrade selected training institutions (both private and public) to get accreditation as CBT centres

5 Forge new partnerships between the public and private sectors, encourage employers to train more directly

6 Establish Technical Working Group for implementation of co-operation among agriculture, education and private sectors

7 Transform how curriculum is designed, delivered and assessed

2.5 Key success factors for ATVET reforms in Africa

Success Factor	Condition
ATVET is demand-orientated	The ATVET system is geared towards improving the competitiveness of the economic sector through integrated demand-driven and competence-based ATVET systems / producing a qualified workforce that responds to labour market demands.
Outcome-based approach	Teach trainees necessary knowledge, information, and skills to enable them to perform according to occupational standards and hence receive certification.
Harmonization with existing National Qualification Frameworks (NQF)	NQF is intended to improve access to work and further studies by ensuring that qualifications are relevant.
Quality and relevance	Effective quality management which continuously monitors the relevance of programmes (to policies and development strategies) and provides support and guidance to private and public ATVET providers.
Open access and equal opportunities/gender sensitivity	Social inclusion by increasing overall access to ATVET training opportunities by all target groups in need of skills development. ATVET is accessible, irrespective of the level of education, sex, ethnic group or religious affiliation. Policies are developed in order to ensure that girls and women are not discriminated against.
Permeability	Provide vertical and horizontal mobility between different occupations and different qualification levels.
Flexible mode of delivery and modularisation	Outcome-based ATVET provides high flexibility in the way of training organization and delivery according to the needs of target groups and occupational requirements. Training modules are accessible to graduates unable to continuously attend classes.
Integration of formal, non-formal and informal vocational education and training	Recognition and certification of competencies obtained through formal, non-formal or informal training. Integration of good practices and training in value chains into formal training programmes.
Combination of theoretical and practical training	Curricula of institutional training should provide a higher ratio of practical training compared to theoretical training (70:30). Implementation of internship programmes. Introduction of cooperative training (a mode of ATVET provided through a partnership between the private sector and training institutions).
Stakeholder involvement private sector participation	ATVET operates at the interface of different sectors (education, labour market, MSE, farmer and trade associations, farmers, public and private training providers). Involvement of all stakeholders from the early stage of policy discussions as key to building trust and ensuring continued participation in the process of change.

3

Stakeholder
engagement

Stakeholders generally refers to any individual or group that, either positively or negatively, impacts or is impacted by the decisions, actions and products or services of an organization (bimpactassessment.net, bsr.org). Stakeholders can be either within or outside an organization. Based on whether the impact is direct or indirect, stakeholders can be grouped into either primary/economic stakeholders or secondary/external stakeholders (bimpactassessment.net). More loosely, a stakeholder can be defined as an actor who holds at least a stake in the changes to be brought about by a project. The material resources, social position and knowledge of these actors make them particularly potent, which enables them to wield significant influence over the design, planning and implementation of a project. (Cooperation Management for Practitioners-GIZ GmbH)

3.1   Tool 2: Stakeholder engagement in ATVET implementation

ATVET implementation, like all CAADP processes, involves a multi-stakeholder approach with country systems leading the reforms. Even though support for the implementation of the project might come technically from AUDA-NEPAD and other partners, country ownership is paramount for effective implementation of the reform process. The ATVET model looks at supporting the country systems which in some cases may lead to the reform of the overall TVET system, especially with the competence-based approach.   Initial stakeholder engagement and support is therefore critical for the effective uptake of the model.

3.1.1   Steps in stakeholder engagement process

Given the critical role and contribution of all stakeholders, it is important to engage them in ATVET reform and implementation using the CAADP ATVET model. Below is the step-by-step approach to stakeholder engagement.
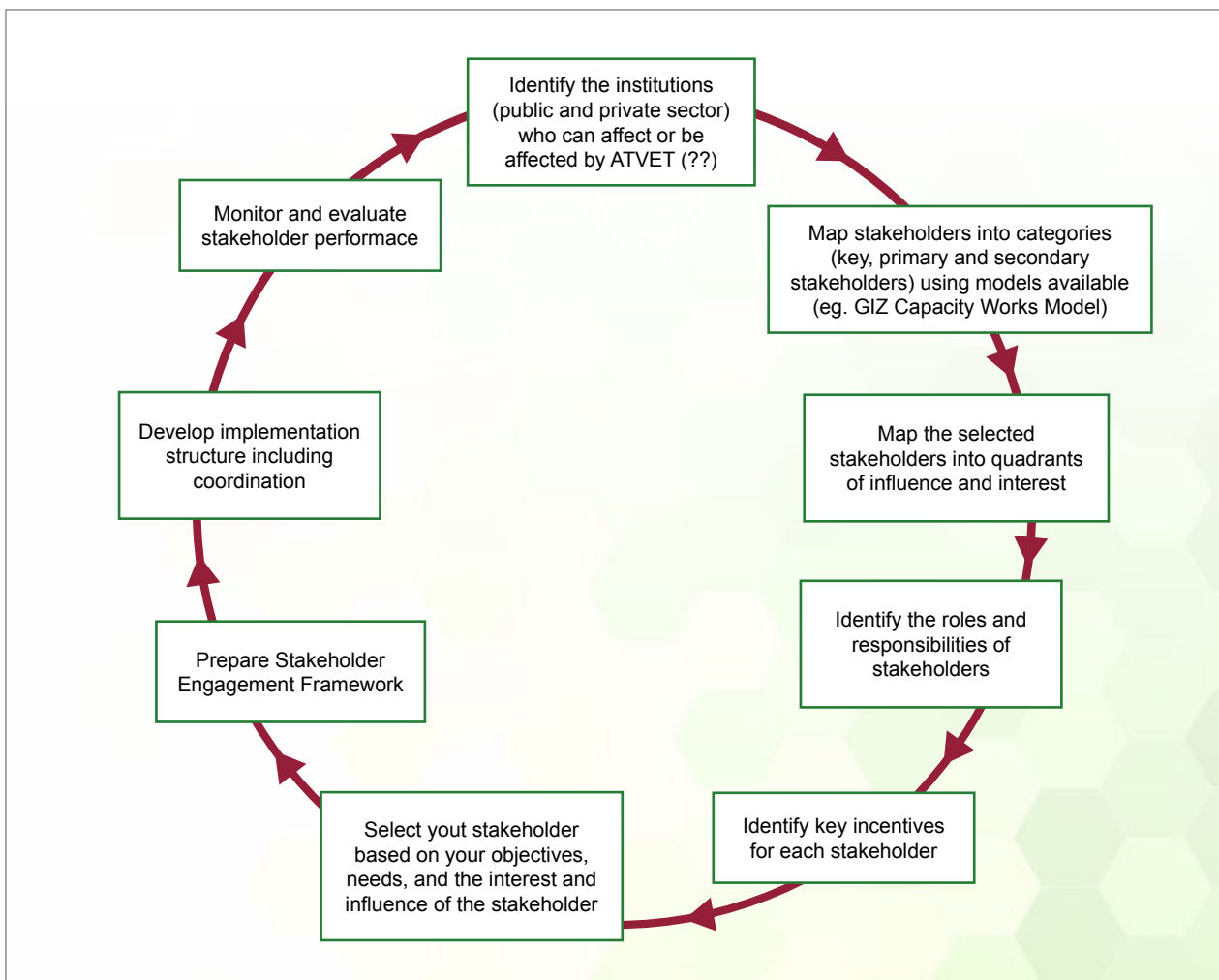
3.1.2 Key stakeholders in a functional ATVET system

Examples of potential stakeholders	
• Ministry of agriculture • Ministry of education and training • Ministry of labour and manpower development • Ministry of gender • TVET authority • National Qualification Framework authority • Private sector enterprises (individuals) • Private sector associations • Specific value chain actors and associations • Agriculture Training Institutes (ATCs) • Colleges of agriculture (universities etc.) • MMEs in selected agricultural VCs • Donors and technical partners in TVET • Students of ATVET • Ministry of youth and sport	The list is not exhaustive and depends on the country and institutions involved in skills development, education and the labour market. However, in almost every country, most of the institutions listed here will have a role to play in ATVET

3.2 Tool 3: Stakeholder mapping

Stakeholder mapping is the process of identifying stakeholders, analysing their perspective and interest, identifying existing relationships between stakeholders according to the ATVET reform objectives. This is followed by a process of prioritizing and ranking stakeholders which is visualised as a map that:

• Provides a snapshot of the situation at a particular time and an overview of all the actors involved in the project

• Helps draw conclusions and formulate hypotheses on the actors' influence and interest

• Aides by outlining the roles of various actors, whilst exposing information gaps and participation deficit

• Corrects premature assumptions concerning individual actors and the relationships between them

These actors can be further categorised according to their level of influence or expected participation throughout implementation. Categories of actors within stakeholder maps are:

Key actors	Actors who are able to use their skills, knowledge or position of power to significantly influence the project.
Primary actors	Actors who are directly affected by the project, either as the designated beneficiaries or because they stand the chance to gain or lose power and privilege as a result of the project.
Secondary actors	Actors whose involvement in the project is only indirect or temporary, such as service providers.
Veto actors	Actors without whose support and participation the targeted results cannot be achieved, or who may even be able to veto the project. They can be key, primary or secondary actors.

Stakeholder map

Secondary stakeholders

Primary stakeholders

Key stakeholders

Veto players

Issues at stake and objective

Primary Stakeholders

- Learners (Woman and Youth)
- Training Providers (Public and Private)
- Organised Agriculture (PLacement and co-funding)
- Statutory and Quality Assurance bodies
- Prioritisied Commodities (Value Chains)
- Civil Society
- Development Partners

Secondary Stakeholders

- Suppliers
- Processors (Value-Addition)
- Employers
- Consumers
- Entrepreneurs

Key stakeholders/veto stakeholders

- Ministry of agriculture
- Ministries of education, training and skills development

- Ministries of labour, employment, youth development, social development, gender
- TVET authority
- Curriculum development, accreditation and authorisation department/authority

3.2.1 Example: ATVET stakeholder map for ATVET in Benin

ATVET Stakeholder Map - Benin
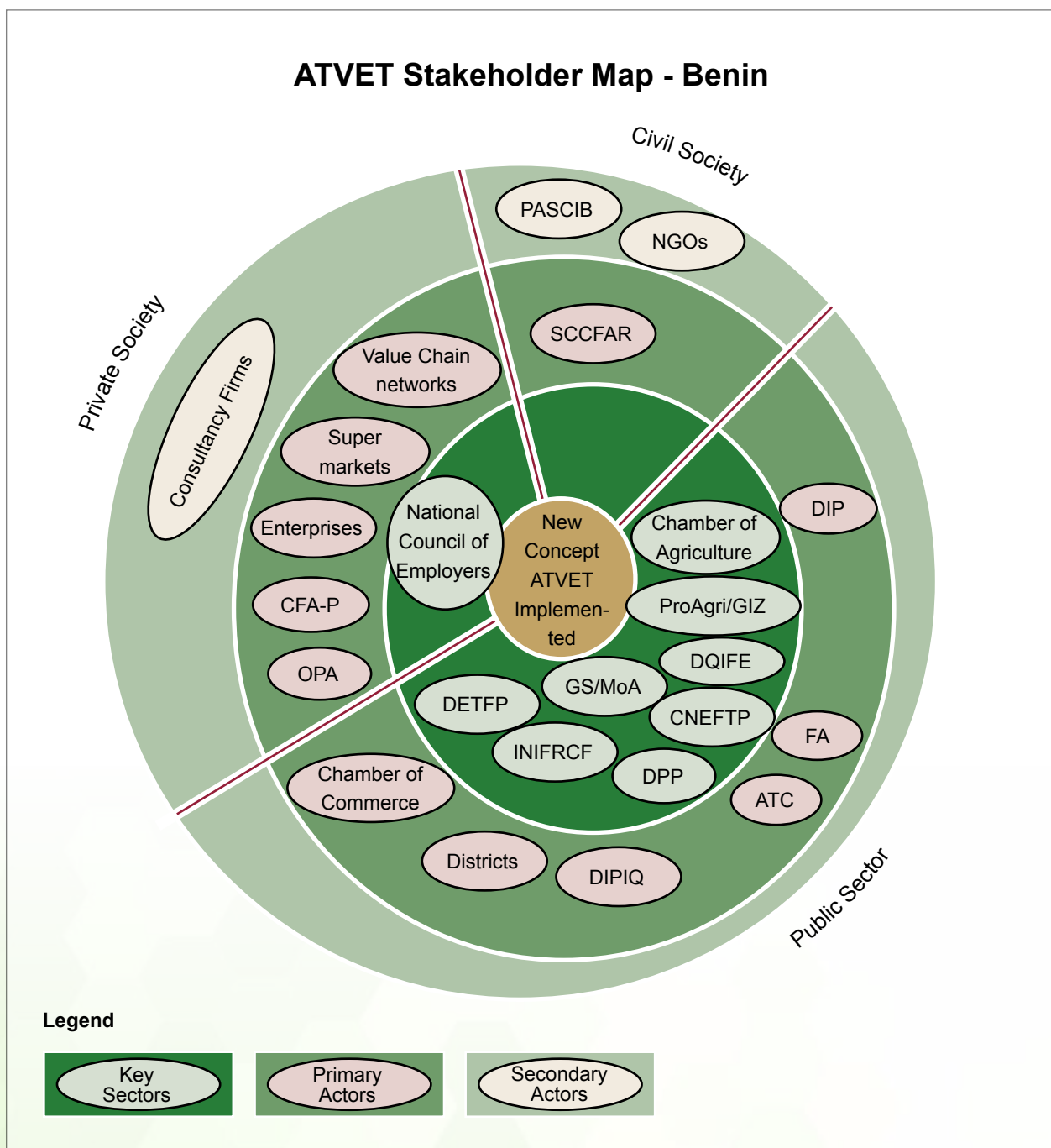
Status	Stakeholders		Roles and responsibilities
	Name	**Definitions**	
Key actors	SGM/MAEP	General Secretary of Ministry of Agriculture, Breeding and Fishing	Coordinates all administrative activities related to the implementation of the project.
	DQIFE/ MAEP	Department of Quality, Innovations and Entrepreneurial Training	Accredits project activities, defines entrepreneurial orientation and training content.
	DPP/MAEP	Direction of Programming and Prospective	Provides governance of the project cycle and manages project resources in relation to GiZ procedures.
	DIP/MAEP	Department of Computer Science and Pre-Archiving	Ensures the capitalization of achievements and the visibility of the project.
	INIFRCF/ MESTFP	National Institute of Training Engineering and Capacity Building of Trainers	Develops curricula, trains trainers, implements programmes, organizes monitoring and evaluates the external and internal effectiveness of training centres.
	DETFP/ MESTFP	Department of Technical Education and Vocational Training	Accredits high schools and training centres. Coordinates the governance of the centres and defines the conditions and procedures for certification and qualification.
	CNCPEFT-PA/ MESTFP	National Concertation Committee for the Promotion of TVET	Ensures the sectorial table and studies the opportunities, identifies the promising businesses.
Primary actors	DIOIQ/ MESTFP	Direction of Pedagogical Inspection, Innovations and Quality	Manages the quality assurance process of curriculum development and implementation.
	LTA	Agricultural Technical Schools	ATC (Agricultural Training Centres) Organize and provide training for learners.
	CFPA	Agricultural Training Centres	
	FA	Faculty of Agronomy	
	OPA	Professional Agricultural Organizations	
	CNA-B	National Chamber of Agriculture of Benin	Contributes to the organization of professional internships and facilitates the professional integration of young people. Facilitates business relationships between value chain actors and the match between training and the needs of the labour market.
	CNP	National Council of the Patronage of Benin	
	CCIB	National Chamber of Commerce and Industry of Benin	
	SCCFAR	Sub-Committee for Agricultural and Rural Training Concertation	Oversees the implementation of the National Strategy of Agricultural and Rural Training.
Secondary actors	Consultancy Firms	Design Offices	Provide benefits in TVET related to their areas of expertise.
	NGO/development partners	Non-Governmental Organisations	
	PASCiB	Platform of Actors of Civil Society of Benin	Contribute to the anchoring of TVET in the national agricultural strategy.

3.3   Tool 4: Stakeholder analysis

After identifying the relevant actors for the project, a stakeholder analysis helps to identify:

*   Institutions with legal, legislative and administrative power and authority to positively support the reforms.

*   Interests of all stakeholders who may influence or be influenced (see note in stakeholder engagement process diagram) by ATVET reform.

*   Potential conflicts or risks that could jeopardise the reform.

*   Opportunities and relationships that can be built on during implementation.

*   Groups that should be encouraged to participate in different stages of the project.

*   Appropriate strategies and approaches for stakeholder engagement.

*   Ways to reduce negative impacts on vulnerable and disadvantaged groups.

To conduct stakeholder analysis, it is always important to ask the following questions:

*   What contribution does each stakeholder offer in terms of material and non-material resources?

*   How can they help ATVET in my country?

*   Does the stakeholder have a true stake in the future success of ATVET?

*   How willing are they to participate in ATVET reforms and CBT training?

*   To what extent does their influence affect ATVET programme in my country?

Influence and interest are the two most critical factors to consider in stakeholder analysis. They show which stakeholders need to be kept informed, managed, ignored and satisfied.

Strategically, actors with high influence and high interest are key actors and should be well-managed. They should always be consulted, their views sought and sometimes approved in most activities. Actors who have high influence, but less interest are also important in the project. They should be satisfied all the time and kept informed of the success of the project. Strategically, efforts should be made to increase their interest to become key actors since they may have resources which the project will need. Actors with high Interest but low influence should be informed of the project.

3.4   Understanding key actors

Stakeholder Map: Who Needs What?

Keep Completely Informed

Key Actors Manage Most Thoroughly

You can ignore them Regular Minimal Contact

Satisfy them Anticipate and Meet Needs

INTEREST of STAKEHOLDER

INFLUENCE of STAKEHOLDER
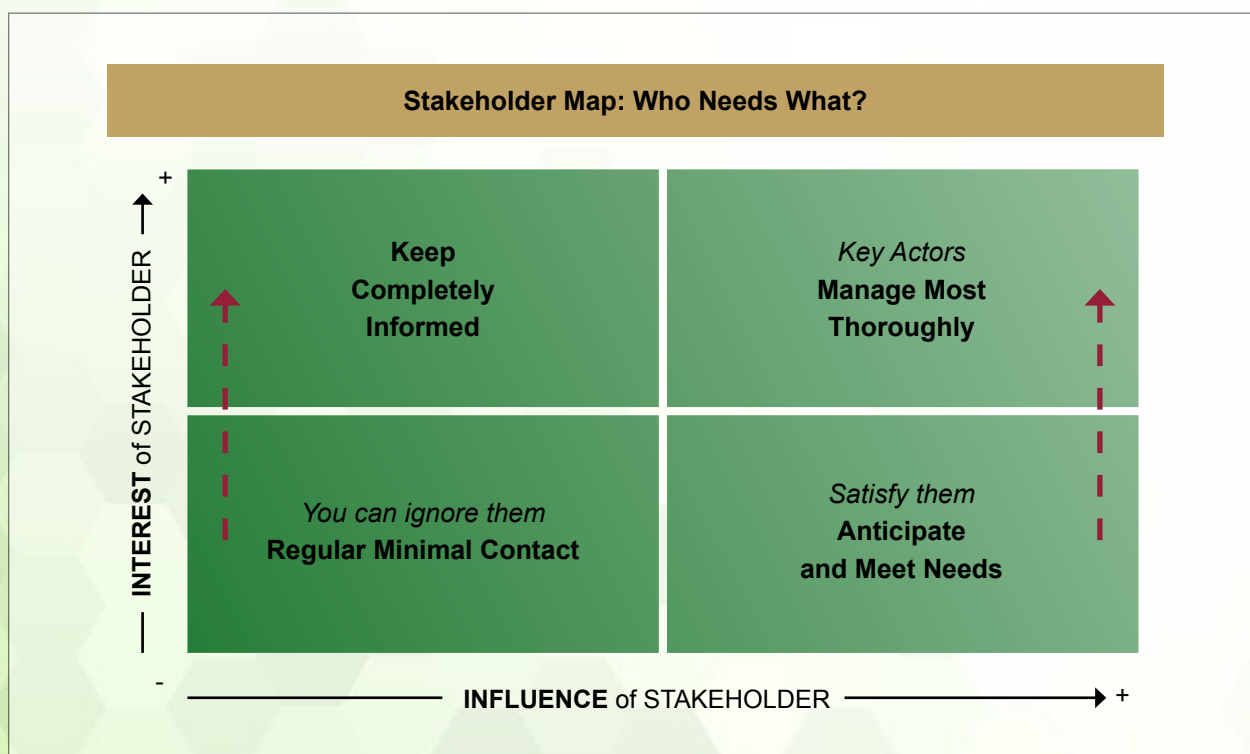
Legitimacy: Institutional position of the key actor's, ascribed or acquired rights that are underpinned by law, an institutional mandate and public approval and are considered legitimate. This includes actors whose explicit approval of the project would be required. They have the power to promote, obstruct or cancel the project.

Resources: Knowledge, expertise, skills and material resources that enable the key actor to significantly influence and change the objective or control access to these resources.

Networks: They have significant influence on other actors, shaping decisions as to whether certain actors should be included or not.

3.5 Private sector as key stakeholders in ATVET model

The private sector plays a critical role in the success of ATVET development. In most cases, it serves as the end user, absorber and provider of opportunities for the outputs of ATVET programmes by providing jobs opportunities to graduates. It is also through the private sector that there can substantial networking and cooperation along the value chain.

Most TVET reforms have focused more on the public sector as a key stakeholder without much emphasis on the private sector. The ATVET model sees the private sector as a key stakeholder and designs strategies to specifically engage them. One of the topics in the
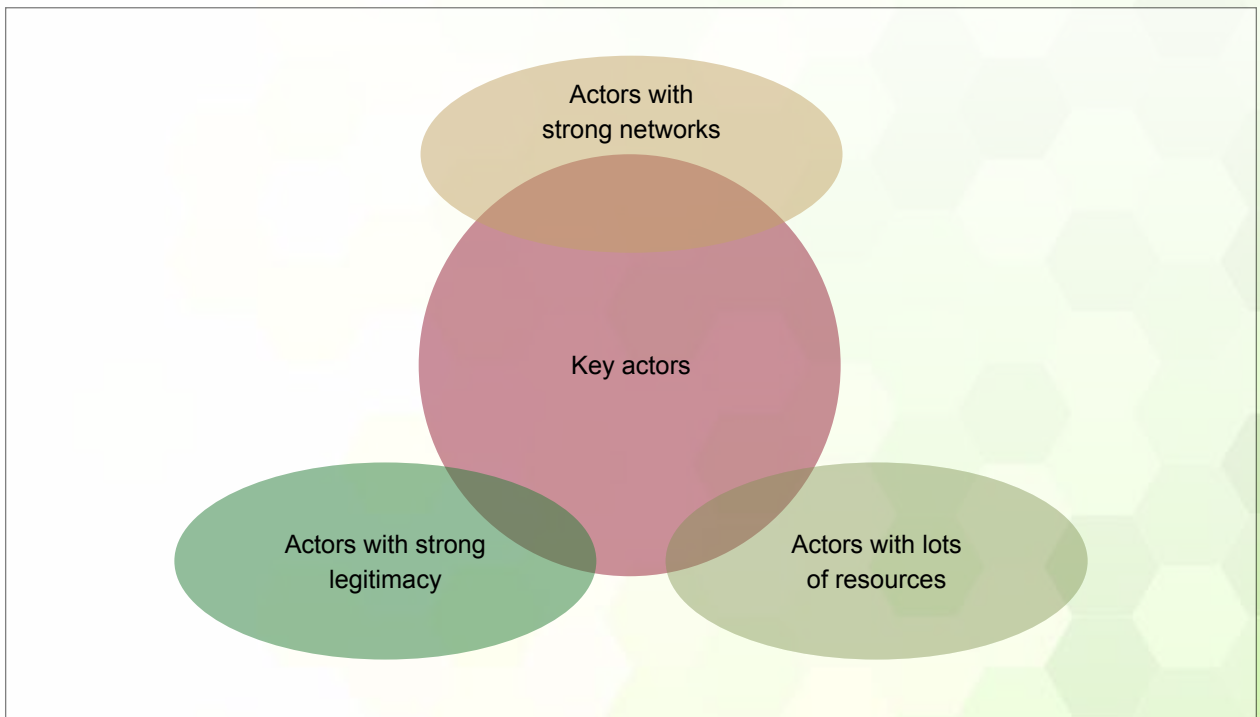
series will focus on the roles and responsibilities of the private sector in the ATVET delivery mechanism.

> Identifying the different forms key private sector stakeholders:
>
> • Professional associations or bodies
>
> • Individual companies or firms working within the selected value chain
>
> • Development partners
>
> Private sector involvement - how to get the best out of them:
>
> • Identify private sector needs.
>
> • Identify their objectives.
>
> • Know and speak the private sector language.
>
> • Identify incentives for the private sector.
>
> • Ensure the project adds value to the private sector.
>
> • Institutionalize a private sector and TVET institution collaboration framework by signing a Memorandum of Partnership (MOP).

The role of the private sector in the ATVET model includes:

Provision of workplace facilities for training: Within the ecosystem, the private sector can offer their premises for practical and hands-on training. In situations where institutions do not have this infrastructure, the private sector becomes an ideal partner to provide facilities or training. Besides the facilities, technical experts within the workplace support training of the students.

Support curriculum development: In Kenya, for example, the National Industrial Union plays a critical role in the development of occupational standards for curriculum development. In Ghana, industry experts participate in the selection of value chain, identify skills gap and provide the information needed for skills training. They lead the development of occupational standards which serve as basis for CBT curriculum development.

Provision of resources: The private sector provides several resources including finance, scholarships for students, payment for teacher training, equipment, facilities for work-based learning (attachments), and study materials. The private sector can provide laboratory, processing and other equipment that they may no longer require because of size or capacity, but that might still be good enough for use in training. They also provide financing for applied research.

Strategic and industry information: The private sector is the key actor in the industry with in-depth understanding of market trends, growth patterns, labour market requirements, future dynamics, threats and opportunities. This information is relevant in deciding what kind of training ATVET should offer.

Policy advocacy: A critical role of the private sector is their strong voice to shape policy formulation. Industry groups such as chambers of commerce, commodity value chain councils, private enterprise federations or foundations, export associations, agro-processing firms, and producers among others, do influence government policies and policy directions to reform skills development programmes and fund youth and skills development projects.

Partnership with the private sector is critical for the success of ATVET reforms and implementation. However, there appears to be a collaborative gap between public and private sector institutions due to a number of reasons:

• Lack of awareness of the role the private sector can play in ATVET/CBT curriculum development and delivery.

• Perception of public sector bureaucratic processes which are not attractive to the private sector.

• Lack of clearly documented incentives for private sector to engage in ATVET and CBT.

• Weak platform to facilitate engagement and dialogue.

• Mistrust between public and private sector.

3.6 Private sector engagement process

Speaking private sector language: Avoid using technical terms and acronyms that may not be familiar to the private sector. By using language, they understand, the private sector is more likely to remain active in discussions and this will invariably lead to achieving the mission and objectives of the reform process. The language spoken will determine the level of attention, interest and commitment of the private sector.

6 Provide the requisite resources and commence implementation

1 Identify private sector that complements the projects objectives e.g. value chains worked in

5 Develop implementation guidelines and timelines with specific milestones

2 Initiate dialogue with the private sector speaking its language

4 Agree on respective roles, expectations, shared resources, incentives, etc

3 Agree on respective roles, expectations, shared resources, incentives, etc

Chapter 2

Understanding the competency-based training concept

4.1 Background

Focus of the tool

- What is competency-based training?

- Why is it appropriate?

- How is a competency-based system structured?

- What are the differences between competency-based and traditional training methods?

4.2 Problem

During stocktaking for the implementation of the project, one of the key gaps identified in ATVET delivery in Africa was the poor design and delivery of teaching and learning. It was determined that existing curricula for agriculture skills and training are outdated and do not meet the requirements of the private sector.

4.3 Solution

Curricula must be developed based on the skills and training needs elaborated by the private sector and labour market in order for graduates to either find formal employment or, through self-employment, produce the standard of inputs or services demanded along the value chain. The CBT approach allows curricula to be based according to the various occupations identified within a VC and the skills gap in the industry.

It is important to understand the differences between CBT and traditional training to elicit an appreciation of the method of training and content and style of delivery.

CBT operates on the belief that people can learn a set of skills that can be applied to a wide range of different jobs and that most training is transferable. A person may already have skills and knowledge that will enable them to gain a level of competency, or even a full qualification, without taking part in a whole training programme. These skills and knowledge may have been gained through study, self-tuition, and work or life experience.

Definition of competence	• Ability to carry out activities to specified standards. • Ability to transfer skills and knowledge to new situations. • Organizing and planning activities coping with non-routine situation. • Ability to interact effectively with others.
Definition of competency-based training (CBT)	• CBT is industry and demand-driven (outcome-based) training programmes based on industry generated standards (occupational standards). • The industry standard serves as the basis upon which curriculum, assessment and learning materials are designed and developed.
Why competency-based training	• Proven model for meeting labour market skills requirements. • Proven model in Germany, Taiwan, Indonesia, etc. • Worldwide trend to address skills needs and employment creation. • Rigorous industry standards are met. • It is a new concept of learning. • Promotes transition of knowledge, skills and attitude to work. • Provides new understanding of assessment. • Quality assurance in education and training are met. • Improves occupational status and opportunities of learners.

Traditional learning	CBT
Passive learners	Active learners
Assessment is exam driven	Learners are assessed on an ongoing basis. It is criterion reference (learners are assessed and judged against standards) and not norm reference (learners are assessed and judged against each other).
Rote learning	Critical thinking, reasoning, reflection and action.
Syllabus is content-based and divided into subjects	An integration of knowledge, skills and attitudes/values. Learning is in real-life/real-work situations.
Syllabus seen as rigid and non-negotiable	Learning programme seen as a guide that allows facilitators to be innovative and creative in designing work.
Educators are responsible for learning. Motivation dependent on the personality of the educator	Learners take responsibility for their learning. They are motivated by constant feedback and affirmation of their worth.
Emphasis on what the educator wants to achieve	Emphasis on outcome (what the learner becomes and understands).
Has defined time for beginning and end	Open access and open exit (flexible).
Teacher-centred	Learner-centred.
Supply-driven	Demand-driven and industry-led.
Assessments are based on examination	Assessments are based on evidence.

CBT/CBET/Outcomes-Based Concept and Educational Taxonomy
(GIZ CBT Manual)

(Taxonomy) Educational Doman

Cognitive
(Knowledge Concepts)

Psychomotor
(Skills)

Affective
(Values, Attitude)

Competent person, family member, citizen & worker

Human Competence

Technical Competence

Social Competence

3 Profiles: One for *Personal* situations, *Social* situations, *Working* situations
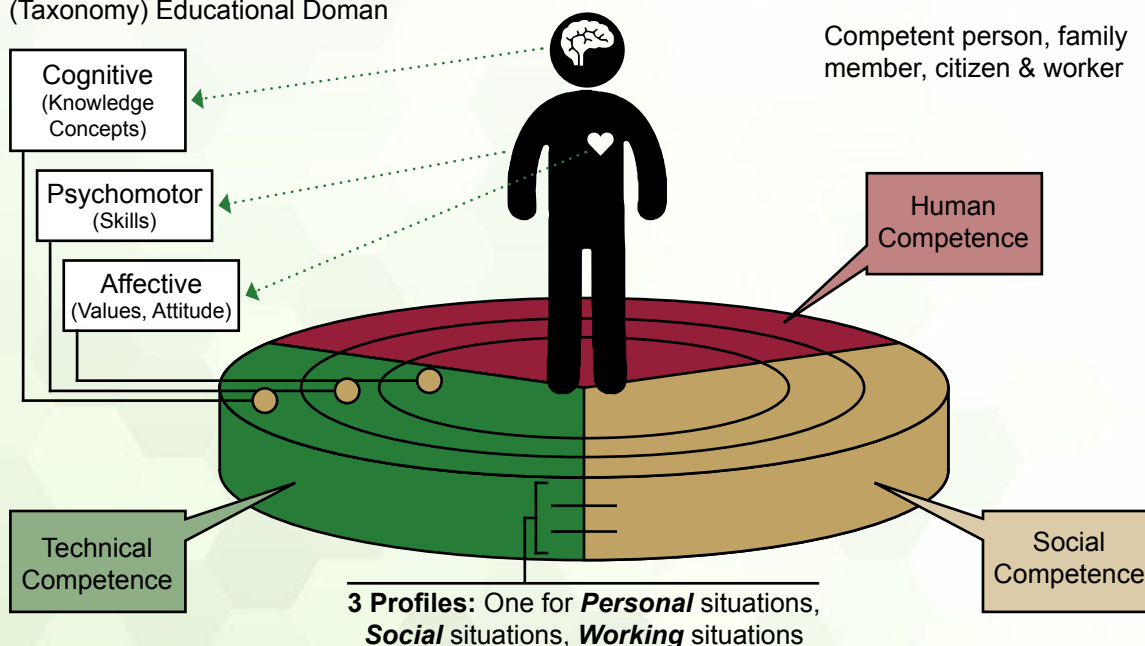
4.4 Targeted Beneficiaries

- Students learning to enter industry, establishing own enterprise.

- Policymakers involved in agricultural transformation, youth employment and SME development. Key among them are ministries of agriculture, education, youth.

- Educational institutions including universities, agricultural colleges, farm institutes, non-governmental organizations and private companies providing agricultural services.

- Learners who want to enrol on the programme as it is different to traditional training methods.

- National and international bodies, manufacturing and processing companies, industry, SMEs.

4.5 Prerequisites

- Good institutions with the required training infrastructure.

- Resources to conduct consistent training.

- Available experts to provide training.

- Private sector readiness to support training.

4.6 Challenges

One of the key challenges to understanding CBT is that people are used to traditional methods of training. Change therefore is difficult for trainers, learners and policymakers alike. Individuals cannot seem to alter their thinking and have limited motivation for change. Similarly, there are also few experts available to provide CBT training to stakeholders. The resources required to provide training for stakeholders is also limited i.e. funding workshops and paying for training facilitators.

4.7 Required implementation steps

8 — Design in-service training for the human resource department of the ministries of agriculture and education, and establish links to learning resources

1 — Define key objectives and outputs for training

7 — Develop indicators for monitoring and plan for follow-up as well as feedback mechanisms

2 — Assemble experts with necessary skills in CBT to provide training

6 — Build agents of change, develop trainers and create pool of CBT reformers

3 — Identify and select relevant stakeholders whose training will make impact

5 — Provide enough time for the training so that participants will be able to understand the CBT concepts. Accept that reforms take time

4 — Agree on respective roles, expectations, shared resources, incentives, etc

4.8 Required investment to effect solutions

- Obtain agreement on funding for ATVET based on documented needs and stakeholders' expectations.

- Investment in the overall TVET system to respond to the CBT needs. CBT reforms in ATVET cannot be done outside the TVET system.

- Invest in the capacity of teachers and instructors which is important for the viability of ATVET.

- Investment in capacity for life-long learning.

- Investment in pool of experts who will delivery CBT training.

- Training of trainers.

4.9 Tool 5: Developing competency-based curriculum using the ATVET model

4.9.1 Background

Apart from the general CBT approach for the ATVET model, the need for reforms in responding to Africa's agricultural requirements calls for a more inclusive and innovative approach in designing and implementing curriculum. Unlike the traditional approach, this new method develops curriculum along agriculture value chains. It is critical that needs analysis take into consideration the skills gaps along specific value chains. The overall understanding of the value chain concept is paramount to the approach of needs analysis and the curriculum development.

The basis of the value chains concept and approach

is the *Valuelink*[3] model which gives a standardised technique for the analysis of key gaps along the value chains. For curriculum development in agriculture TVET to be successful, curriculum design must also take into consideration other issues such as gender and women's needs along the value chains, food security, environmental sustainability, climate and greening agriculture opportunities.

Other considerations should be:

- Involvement of employers/industry/trade associations/lead or professional bodies, not only in identifying the occupations that require skills development, but also as partners in training delivery and offering work experience opportunities.

- Development of occupations in demand in the labour market to ensure that there is a high absorption capacity for the graduates within the selected value chain.

- Quality assurance is integrated in all the processes.

4.9.2 Problem

Currently ATVET systems are not well established and due to the fragmentation of ministerial ownership of agriculture training, ATVET qualifications are not always recognised.

4.9.3 Solution: How a competency-based system is structured

The image below highlights the core pillars around which a competency-based system is structured.

1. SET STANDARD	2. DEVELOP CREDIT VALUES	3. ADOPT LEARNING STYLE
The basis of a competency-based system is the definition of the standards. These units can be the basis of certification-sometimes groups of units form awards.	Credit values are assigned to units. This can be based on the content and notional time (facilitating, learning and assessment) to complete the units.	A learner can work towards a qualification, unit or units.

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3   Valuelinks 2.0 – Concentrating On Business Models-GIZ 2016

4.9.4   Target Beneficiaries

• Policymakers, technical people at the ministry of education and agriculture, TVET authorities.

• Training Institutions and training providers, trainers.

• Development partners/organizations.

• Value chain actors and farmer organizations.

• Rural technicians and artisans.

4.9.5   Expected benefits

• Improvement of the country's overall TVET system for further orientation to demand-driven delivery.

• Private sector support in vocational education delivery.

• Job readiness of graduates and a good tracer system to monitor after training effectiveness.

• Efficient use of human, material and financial resources allocated to vocational training.

4.9.6   Prerequisites

Before approaching the phases of the implementation process, it is relevant to identify the prerequisites. They might not guarantee success, but their absence could lead to insurmountable difficulties during implementation.

These include:

• Political will to implement the CBT and openness to change.

• Knowledge of the CBT approach by the actors concerned.

• Allocation of the resources (human/material) necessary for the implementation.

• Organizational unit of the implementation project.

• Respect for the pedagogical progression and the content of the evaluation framework.

4.9.7   Challenges

The challenges include:

• Reorientation of national TVET systems to adopt the CBT approach.

• Reorientation of the training process to encourage self-employment.

• Private sector and agricultural enterprises understanding their role in the partnership of the demand-driven ATVET approach.

• Establishment of private-public partnerships to address constraints to financing.

4.9.8   Required implementation steps

The figure below shows a simplified flow chart for implementation of competency-based training. In all the steps, quality assurance is crucial. This is only a guideline and is a synthesis of the successes that have been recorded in the development of the ATVET project.

1 Select a value chain	2 Conduct labour market analysis to identify gaps and market demand	3 Assemble team from educational, VC actors, agriculture, CBT experts, curriculum approving bodies	4 Generate occupational standards
5 Develop assessment instruments with marking guidelines	6 Develop learning material	7 Write unit specifications	8 Validate the standards
9 Seek programme approval	10 Train and accredit facilitators, assessors and verifiers	11 Design and implement quality assurance mechanism	12 Train programme managers
13 Seek centre approval	14 Prepare material and organize induction programme for learners and orientation for staff	15 Select and approve centre ready to implement CBT	16 Deliver training assessment, verification and certification

| Step	Remarks and explanation
Value chain selection	Value chains must be selected in alignment with priority value chains identified in National Agricultural Investment Plans for their potential in the areas of either: • Food security for staple crops that are necessary for attaining nutrition. • Strategic commodity for trade purposes with emphasis on regional value chains which require further development to increase competitiveness. • Employment creation with potential for a high absorption capacity and opportunities for graduates and trained farmers to work or operate. • Address issues of employment, gender, environment, food security, domestic and export market and economic development. • Recommended by key stakeholders, especially the private sector. • Economically viable, with the potential for contributing to economic growth for trained participants. • Has a high demand, making it a high priority for standard development. • Represents a large percentage of the workforce and requires specialized skills for their improved performance.

Step	Remarks and explanation
Labour market analysis	A labour market analysis must be carried out using the following prescribed steps: • Conduct a training or skills needs assessment with the involvement of employers/industry/trade associations/lead or professional bodies to inform where skills gaps exist. • Establish that there is a need for the development of the TVET sector (is there much value to be added, or is the system fully functional and operating within CBT approach). • Establish absorption capacity for the graduates in either formal or non-formal employment, • Use both primary and secondary data for analysis. • Identify all jobs/occupations along the selected value chain and prioritise which ones require further analysis. • Analysing the role of all jobs within a value chain is the initial step in a training matrix process needed to identify training and assessment requirements for each job/role. Multiple sources of labour market information should be used: • Over-reliance on short-term "job bank"-type information should be discouraged.
Assemble a team	• Look out for experts nationally and internationally. • The team should comprise personnel from education, private sector and ATVET trainers. • Curriculum development experts on the CBT approach should lead the process.
Occupational standards	• Ensure that you have a full complement of value chain actors to help develop occupational standards in order for the experts in each occupation to ensure the necessary elements are captured. • Engage a competent facilitator to guide the process. • Allocate enough time and educate participants to understand what "occupational standards" are and how useful they will be in providing skilled labour needed by industry. • Guide process so that OS addresses performance statements (what people are expected to achieve) and knowledge and skills statements (what you need to know and be able to do). • Develop OS such that it can be regarded as the benchmark of competence required in the sector.
Assessment instruments with marking guidelines	Assessment is a critical link in a cycle of human capital development, whether it takes place in an institutional training programme, outside of formal training programmes, on the job, or is used to evaluate life experience. Assessment is one of the crucial elements of lifelong learning both for individuals, who need a method of assessing and certifying qualifications developed during different life stages, and for training institutions that need to improve assessment and articulation programmes. The trend in CBT assessment has two important concepts that guide all assessment processes and practices. These are: I. Learning outcome, based on occupational standards, that describes what knowledge, information, skills, attitudes and values learners will have been acquired at the end of the programme.

Step	Remarks and explanation
Assessment instruments with marking guidelines *(continued)*	II. An assessment standard, based on occupational standards, that describes the level at which learners should demonstrate achievement of the learning outcomes and ways (depth and breadth) of demonstrating their achievement. • Assessment must be directly linked to and developed from occupational standards (as opposed to being derived from training standards), if it is to reflect and assess what a person is qualified to do in an occupation. • Assessment programmes must meet minimum validity requirements (i.e. test evaluates the occupational standard selected). • It must meet reliability requirements (i.e. evaluates the standard in a consistent way). • Ensure local staff are adequately trained in assessment design and administration • Ensure that assessment is performed by trained assessment professionals in cooperation with the stakeholders who created the initial occupational standards. • Avoid errors in validity and reliability of developed and administered assessment instruments. • Assessments must include both knowledge and performance. • In addition to evaluating technical skills related directly to the occupation, other basic skills (literacy and numeracy), life skills (social and citizenship skills), general employability skills (communication and decision-making), and possibly entrepreneurial and management skills are assessed. • For individuals: Assessments can lead to certification, assist in initial job entry and upward and horizontal career mobility, and, in the context of lifelong learning, provide a method of documenting competencies learned at different times and through different avenues. • For employers: Assessments assist in hiring, promotion, and planning of internal training. • For training institutions: Assessments provide a way of benchmarking the quality of skills and knowledge provided against the competencies actually required in an occupation. • Employ where possible criterion assessment (individual's performance is assessed against a defined standard and the results can be pass or fail) and/or norm reference (individuals are compared with others taking the same assessments). • Ensure that performance and knowledge assessment are directly linked to occupational, as opposed to training standards. • Assessments must be both valid and reliable if they are to be credible to stakeholders.
Learning materials	Developing learning material is the responsibility of the curriculum development authority in the country. The following need to be addressed during the process of developing learning material: • Establish and validate unit specifications. • Establish the content of the learning material. • Ensure that the learning material is interactive. • Establish self-assessment instruments for learners. • Establish peer assessment/appraisal instruments for learners.

Step	Remarks and explanation
Unit specification- statement of standard	The statement of standards defines the learning outcomes and aspects of achievement, which ensure that a learner has demonstrated the necessary skills and knowledge. The content is mandatory, which means that the learner has to be able to satisfy every requirement of each part of the standards. The following are the areas to be covered by the statement of standards: • Reference number • Unit title • Date • Level statement • Credit value • Access statement • Unit introduction • Learning outcomes • Performance criteria • Range statement • Evidence requirements

Standard validation	For the validation of the occupational standard, it is important to select relevant organizations and experts to review the draft version of the standard. The validation should focus on three main aspects:
	
	i. Content quality, validated by relevant occupational experts.
	
	ii. Format quality, validated by qualifications framework experts.
	
	iii. Process quality, validated by qualifications framework experts.
	
	Questions that should be addressed include:
	
	a. Content quality:
	    • Does the occupational standard incorporate all key groups of tasks?
	    • Does it incorporate underpinned knowledge, and not just skills?
	    • Does it incorporate transversal competences, and not just sector specific?
	
	b. Format quality:
	    • Has the OS template/form been agreed on?
	    • Is each task/function sufficiently precise?
	    • Has each group of tasks a direct reference to its outcome?
	    • Is each group of tasks directly linked to a set of knowledge, skills and competence?
	
	c. Process quality:
	    • Was the development of OS based on research on the occupation?
	    • Was drafting of the OS done by appropriate experts?
	    • Did the validation process involve experts from other occupations?
	    • Have all relevant stakeholders been involved?
	    • Were the recommendations by occupational experts adopted or negotiated?

Step	Remarks and explanation
Programme approval	• Ensure the programme is presented to appropriate approval body in the country. • Receive statutory approval for commencement of training. • Rework if curriculum not approved by the approval body. • Avoid scope creeping.
Training and facilitator accreditation	• Ensure that facilitators undergo training to improve their skills and understanding of facilitation. • Accreditation and training services' generic facilitator training course will equip learners with the required knowledge and skills to facilitate learning using a variety of given methodologies in their field of expertise. • Organize facilitator training course to better understand National Qualifications Framework (NQF). • Train facilitator to be able to determine the needs of learners, possible learning barriers, previous learning experience, different learning styles, etc. • Facilitator should be able to ensure that the learning methods selected are appropriate for the expected outcomes. • Ensure that learners have an active role in their own learning. • Facilitation must enable learners to draw from their own experiences in their working environment and apply the concepts for themselves.
Quality assurance mechanism	• Establish internal and external verification guidelines. • Establish systems verification guidelines. • Establish appeals procedures. • Establish customer complaints and feedback guidelines. • Establish appraisal guidelines. • Establish evaluation guidelines (for future policy directive). • Assessment blueprint. • Assessment (formative and summative directives).
Programme managers training	Coaches/trainers/instructors/teachers need to be competent in addressing the courses and training programmes in class and at the workplace (off-the-job and on-the-job training). They will need to be trained in coaching techniques and if they achieve the required level of competency, they will be registered as approved trainers.
Select centre	• Does the centre have the necessary training facilities and experts to deliver CBT? • Has it incorporated women's concerns in its facilities? • Can the centre attract learners? • What are the facility and expertise gaps that need to be rectified for it to be "Training Centre Compliant". • Does the governing body (top hierarchy) subscribe to the use of the centre for CBT training?

Step	Remarks and explanation
Induction programme	The purpose of induction programmes is to offer students and college staff insight into the implementation of CBT and the advantages of offering it. • Select experts to conduct induction programme. • Prepare materials to share with students so they understand CBT from the onset. • Allow learners to reassess their willingness to undergo CBT training rather than conventional training.
Centre approval	Approval of the national certification system is crucial. The CBT curriculum-development process, and accreditation of the training providers and trainers are paramount.
Deliver training	The CBT approach addresses the missing link between informal and formal ATVET system, the recognition and certification of prior informally acquired skills. Hence the ATVET delivery model's emphasis on formal, non-formal and informal training delivery.
Verification and certification	• System verifiers must visit centres regularly to ensure that the systems required for supporting the delivery of qualifications are operating effectively. • Ensure that guidance and advice are provided to centres on the development of internal quality assurance systems. • Appoint verifiers to act as a source of expertise on assessment issues. Carry out approval visits to new centres and maintain an overview of the delivery of qualifications to centres.

CBT/CBET Implementation Flow Chart
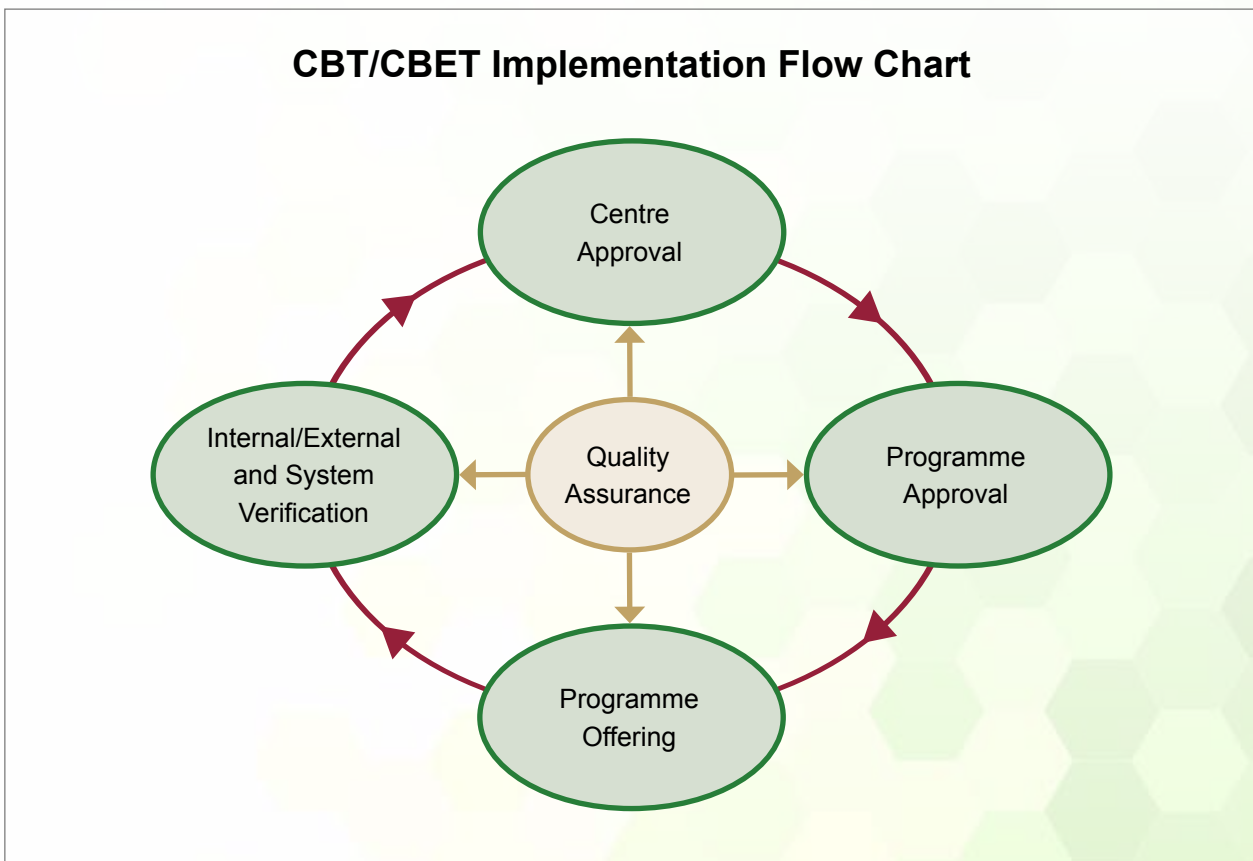
4.10 Tool 6: Occupational Standard (OS) generation

Occupational Standards (OS) describes what you need to do, know and understand in an occupation to carry out a role in a consistent and competent way. OS defines the knowledge, skills and attitudes required for effective workplace performance. It specifies what a person should know and do in order to effectively carry out the functions of a particular job in the context of the work environment. Standards are the agreed minimum best practices in an occupational area and take into account all necessary statutory requirements. It is important for both large and small businesses since it describes good practices in particular areas of work, sets out a statement of competence, provides resources for a variety of workforce management and quality control tools, offers a framework for training and development and forms the basis of all qualification frameworks. It is used to:

•   Describe the skills you need in your workforce.

•   Discover the skills of your current employees.

•   Identify skills gaps and shortages.

- Identify training and development needs.

- Develop training and recruitment plans.

- Recruit staff with the skills you need.

- Improve your business processes.

- Ensure there is a professional and competitive industry.

- Develop industry qualifications.

The generation of occupational standards are important because of existing mismatched, missing and weak linkages, and gaps between TVET providers and industry.

The following steps are required:

4.10.1 Step 1: Establish rationale for occupational standards generation

- Is there a need for the training along the selected value chain?

- Is there absorption capacity for the graduates?

- Will the programme make a unique contribution?

- Are there clear progression routes?

- What outcomes should be included?

1
Ensure that occupational standards and related assessments are essentially linked between workplace employment requirement and human capital development

3
Include learning outcomes to ensure that the necessary skills, attitudes and knowledge are developed by a person to enable him or her to function at an agreed level of an occupation

2
Ensure that eduacation and training programmes are direcly linked to the needs of the workplace and overall economy of the country

4.10.2 Step 2: Analyse skills areas

- What kinds of skills are required for the job market?

- List job activities.

- Identify knowledge, skills and attitudes.

- Breakdown general areas of competence (GAC).

- What are the skills required?

- What are the sub-skills required?

4.10.3 Step 3: Develop units

- Compile units.

- Identify a working GAC that will become the unit title.

- Identify skills that will become learning outcomes (depends on country).

- Identify sub-skills that will become performance criteria.

4.10.4 Use of occupational standards

Individuals' use of occupational standards	Organizations' use of occupational standards
• Develop their self-confidence and enhance their personal effectiveness.	• Identify and plan personnel requirements.
• Provide a means for determining gaps in knowledge, experience and skills.	• Design and implement recruitment and selection processes.
• Offer an objective process for identifying training needs.	• Develop job descriptions and specifications for staff and volunteers.
• Ensure best practice.	• Design, deliver and evaluate training.
• Support their professional development.	• Demonstrate the competence of the organization when applying for funding or tendering for projects.
• Open up a wider range of career opportunities.	• Demonstrate the competence of the organization when applying for funding or tendering for projects.
• Help to transfer their competence to other work situations.	• Plan appropriate development and training.

4.10.5 Step 4: Procedures for curriculum validation

1	Check the number of occupational standards generated (structure of the programme).	
2	Use quality checklist to establish the validity of the OS.	
3	Check the presentation of the format used.	Validation is performed by people who have been trained and accredited by the relevant authority or institution and certified to perform the task.
4	Check the steps used to establish industry needs: • Were people from the industry involved? • Does it have clear headings and sub-headings? • Is it clear and straight to the point? • Is the OS presented in an acceptable approval format?	

4.10.6 Things to consider when introducing competency-based training method

Important things to consider in delivery

1. Induct learners into the CBT before the delivery process.

2. Give unit specifications and learning materials to the learner during the delivery process.

3. Make it learner-centred and not teacher-centred.

4. Use formative assessment during delivery

5. Use role models' approach.

6. Use success stories from entrepreneurs within the value chain.

7. Involve experienced entrepreneurs in developing the curriculum

8. Entrepreneurship must not be taught only as a subject but must be learned as a practice.

9. Set up and use entrepreneurship incubators.

10. Training can be part-time, full-time, workplace learning, flexible learning.

4.10.7 Providing post-training support

ATVET focuses more on training. But for trainees to be able to meet the basic objective of the approach to become either employers or employable, there is a need to provide post-training support to enable them to set up their own businesses (when required). There should also be impact monitoring to evaluate the quality of training.

Emphasis on entrepreneurship as a key component in training delivery. Facilitate start-up finance for graduates.

Link ATVET to other initiatives in country and private sector.

Private sector focus prepares the students for the world of work.

Develop and systematize business models that are working well and try to replicate them.

Combine hard business skills with soft leadership skills to equip trainees with visionary thinking and enable them further their occupations on their own.

Linkage of formal and non-formal training is important to emphasis a modular approach for training delivery.

4.10.8 Case Study: Ghana COTVET CBT implementation flow chart

The implementation of ATVET in Ghana includes the following as described section in 4.9.8:

- Selection of value chain.

- Establishment of ITAC sub-committee.

- Generation and validation of occupational standards.

- Development of unit specifications.

- Development of learning materials.

- Development of assessment instruments and marking guidelines.

- Programme approval.

- Training and validation for facilitators, assessors and verifiers.

- Centre approval/accreditation.

- Delivery of training, assessment, verification and certification.

COTVET CBT Implementation Flow Chart

Start Development

1 Establish and Train occupational standards generators and programme developers.

Identify Awarding Body

2 Conduct industrial Needs Assessment

Generate and Validate Occupational Standards

4

Programme Development

4.1 Write Units Specifications

4.3 Develop Assessment Materials with Marking Guidelines

4.2 Write Learning Materials

5 Validate Programme and Offer Centre Approval

Feedback

6

6.1 Induct Students

6.2 Conduct Staff Orientation

7 Establish Programme Team

7.1 Prepare programme delivery Plan, Assessment Plan, Internal and External Verification Plan

8 Train Programme Leader

9 Train and accredit Facilitators/Assessors

10 Train and accredit Internal and External Verifiers

11 Train and accredit System Verifiers

Feedback for Improvement

Complete first cycle

16 System Verification

15 Award of Certificates by Awarding Body

14 Train and accredit Workplace facilitators/assessors and internal verifiers to offer WEL programme

12 Start Programme (Delivery/Assessment)

13 Internal and External Verification

NOTE: 1-6 development stages, 7-11 ToT and 12-16 implementation
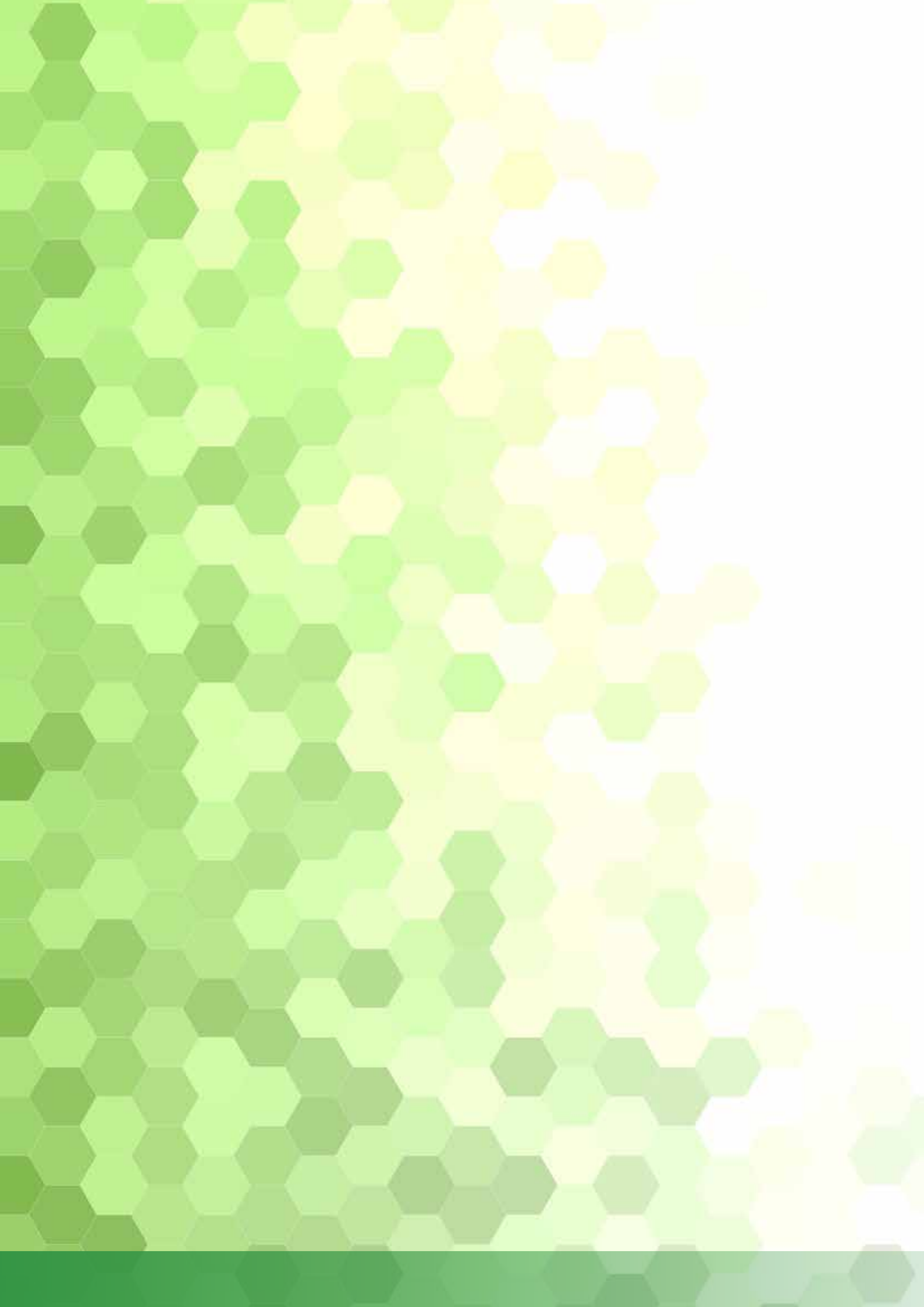
Glossary of terms

Appeal against assessment decision	A process whereby a learner can challenge an assessment decision.
Approaches to generating evidence	The main purpose is to give guidance on possible teaching and delivery approaches, which will allow the learner to achieve the learning outcomes and produce or gather evidence. In this regard, advice can be sought on the use of specific teaching materials, use of group work, visiting speakers, field trips, use of work placements, etc.
Approval	The process by which an awarding body ensures that a learning environment has the required systems to deliver and assess an award.
Articulation	A term used to explain the link or connection between levels of qualifications or programmes in the TVET qualifications framework.
Assessment	The process of generating and collecting evidence of a learner's performance and judging it against established standards or defined criteria.
Assessment instrument	A means of generating evidence of learner's level of achievement against a set standard.
Assessment scheme	The instruction and advice to assessors, characteristics/exemplification of satisfactory performance/response, and/or correct answers.
Assessor	An accredited person designated by a learning facility to gather evidence of a learner's competence, judge it in accordance with defined standards, and record the learner's achievement.
Audit/system verification	A system used for checking the efficiency and effectiveness of a learning environment's processes and procedures (quality assurance system).
Awarding body	A body with authority to award a qualification under a national qualification framework.
Authentication	A process by which an assessor confirms that an assessment has been undertaken by a learner and that all conditions governing it have been observed.
Award	A recognition which will provide proof of a learner's competence. The formal process of crediting a learner with achievement, and issuing Qualification Certificates and Records of Education and Training (RET).
Certification	The formal process of crediting a learner with achievement, and issuing Qualification Certificates and Records of Education and Training (RET).

Competence	The ability to perform activities to the standards required or specified. It represents what people know and can do as a result of learning, and is evidence that people do have knowledge, attitudes and skills. The standards are normally expressed in terms of learning outcomes.
Competency-based training (CBT)	CBT is industry- and demand-driven (outcomes-based) education and a learner-centred approach to education and training programmes. The learning is based on well-defined industry generated standards (occupational standards). These standards are the basis upon which the programme (curriculum), assessment and learning materials are designed and developed.
Credit accumulation	The accumulation of unit credits which may lead to a full award when sufficient and the appropriate units have been achieved.
Centre contact	A person at a centre who is the primary point of contact between the centre and the awarding body.
Content/context	The content/context section of the support notes gives guidance and more detailed information about how to interpret the standards. This may include background information, explanations of terms used in the learning outcomes, performance criteria or range statements, and fuller discussion of the intentions and scope of the standards. This section can be used for including syllabus-type information. Guidance can be given about the use of specific teaching materials, the appropriate use of group work, visiting speakers, field trips, etc.
Credibility	The extent to which users of qualifications have confidence that they match public expectations and the published performance criteria.
Credit profile	It is the number of credits required for a programme.
Credit values	Credit values provide a method of describing and comparing the amount of learning achieved at the same or at different levels. They are used to quantify the outcomes of learning that are subject to reliable methods of assessment. The credit assigned to a unit is based on the amount of time that an "average" learner might take to achieve the outcomes. This can be based on the notional time to complete the units, covering the facilitating, learning and assessments time. The definition is acceptable to all but there is a need to consider the variation in the amount of time that constitutes a credit unit from country to country.
Education and training package	Education and training packages contain all the unit/module specifications and learning materials needed for a particular unit/module in order to equip a learner with the identified competency. Some countries, for example Ghana and Kenya, are abandoning the term "module" at TVET level and use "unit" to differentiate from the university semester system that uses a module approach.
Elective unit	An optional unit within a qualification or programme. This unit is used to extend the activities in a mandatory unit within a specialities context or pathway and/or provide additional skills, knowledge and understanding to the learner.

Evaluation	The process of determining to what extent the educational systems' objectives are being realised. This is discussed in the context of the whole education system as opposed to a single assessment.
Evidence requirement	Useful data that must be gathered to demonstrate that the learner has met the standards (outcomes) specified.
External assessment	Assessment designed and managed outside the learning environment.
External assessor	The person designated by the awarding body to assess and grade external assessment projects.
External verification	The process of ensuring that standards for assessment and quality assurance are being maintained and that the learning environment has carried out the assessment in line with the requirement of the unit specifications.
Facilitator	The one who facilitates a unit.
Formal learning	Learning that takes place in educational and training environments towards recognised qualifications.
Formative assessment	A process used to collect evidence on the learner's progress (strengths and weaknesses) during the facilitating of learning -- not necessary formally recorded for certification purposes.
Induction	A period used to introduce the learner and the staff to a learning environment and their programme of choice within the new concept CBT.
Informal learning	Any experimental learning that takes place through life and work experience. It is often unintentional learning. The learner may not recognise at the time that the experience contributed to the development of their skills and knowledge.
Integration	The process of combining assessment for several learning outcomes and/or units into a single coherent activity.
Internal assessment	Unit assessment carried out by the learning environment.
Internal verification	The process of ensuring that assessment judgements are made consistently to meet the established standard. It is also a process used by the learning environment staff to verify internal assessment decisions.
Internal verifier	A person with responsibility to ensure that assessment judgements are applied uniformly and consistently by all assessors in the learning environment. The underpinning knowledge activities identified in the units.
Learner-centred approach	An approach to facilitating and learning which takes account of a learners' interests, ability and learning style. It is an approach that is not rigidly time-bound and allows a degree of flexibility.

Learning environment/centre	Any place where approval is given by the awarding body for learning to take place. It could be an institution or workplace.
Learning outcomes	Activities to be performed by the learner.
Learner/student	An individual who enrols for a course of study.
Level	This indicates the learning complexity based on the qualification framework.
Level descriptors	Level descriptors show the characteristics of the qualification level, that is, complexity and depth of knowledge, skills and attitudes linked to the level. The level descriptors also provide a basis for comparison between qualifications.
Mandatory/core unit	Unit that is compulsory in a programme leading to a qualification.
National Qualifications Framework (NQF)	A National Qualifications Framework (NQF) sets out the levels at which qualifications are recognised in the entire education and training system. It helps learners to make informed decisions on the qualification they want to pursue and to promote: - access, motivation, promote lifelong learning, avoid duplication and overlap of qualification, as well as public and professional confidence in the integrity and relevance of national awards.
Non-formal learning	Learning that takes place alongside the mainstream systems of education and training and does not typically lead to formal certification.
Notional design length	The notional design length reflects the credit value attached to the learning unit specification (1 credit = 30 hours), giving the estimated number of hours required for an average learner to achieve all learning outcomes. The notional design length is always expressed in multiples of 30 (15 hours = 0.5 credit) and should not normally exceed 120 hours (3 credits).
Observation	A means of assessment in which the learner is observed carrying out tasks that reflect the performance criteria of the learning outcomes.
Observation checklist	A means of recording learners' performance against a list of pre-determined competencies.
Occupational standards	Occupational standards state what the outcome of learning or work task/ activity is, and what evidence a learner must produce if they are to receive formal recognition of their knowledge, attitude and skills. The occupational standards also detail the quality of the required evidence, notional hours representing what national stakeholders consider being acceptable performance. The basis upon which the programme (curriculum), assessment and learning materials are designed and developed is the standards or outcomes.
Performance criteria	These are standards by which the activities have to be performed.
Portfolio	A compilation of evidence which can form the basis for assessment, or a collection of summative assessment evidence generated by the learner and used to confirm achievement of learning outcomes.

Progression	A movement from one qualification level to the next.
Purpose	The purpose statement (also called the rationale) should give a brief summary of the main aims of the unit and its target audience.
Quality assurance	It is any system in a learning environment or at a national level which promotes confidence in a qualification by guaranteeing the achievement and maintenance of standards.
Quality assurance system	It is any system in a learning environment or at a national level which promotes confidence in a qualification by guaranteeing the achievement and maintenance of standards.
Range statement	Situations/context in which the activities have to be performed and for which evidence must be gathered.
Recognition of prior learning (RPL)	It is a process that assesses the individual's non-formal and informal learning to determine the extent to which that individual has achieved the required learning outcomes, competency for entry to, and/or partial or total completion of a qualification.
Record of achievement	Documentation of achieved units that will lead to certification.
Skills	Competencies developed by a learner during education and training.
Summative assessment	A process of collecting evidence that will demonstrate achievement of the learning outcome, usually applied at the end of a learning experience (unit). This information is used for certification purposes.
Support notes	In many ways, the support notes are as important as the statement of standards. The support notes advise the reader on how to interpret the standards. You are free to give the reader as much information as you wish about interpretation, teaching and delivery approaches and methods of assessment, but it is advisable (and helpful) to give as much information as possible.
System verifier	The person appointed by the awarding body to check the efficiency and effectiveness of a learning environment's processes and procedures (quality assurance system).
Unit	A group of related activities (learning outcomes) in an education and training programme to equip learners with skill, knowledge and attitude (capability to complete a certain task; unit of competency).