



Manual For Developing Competency Based Standards

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TABLE OF CONTENTS

	PAGE
I. INTRODUCTION.....	1
II. POLICY and PROCEDURE.....	3
A. Purpose.....	3
B. Scope.....	3
C. Responsibility for the Authority, Implementation and Maintenance of the Contents of this Manual.....	3
D. Guiding Principles in Competency Standard Setting.....	4
E. Benefits Derived from Using Competency Standards.....	6
F. Glossary of Terms.....	6
III. Lao National Vocational Qualifications Framework.....	8
Level Descriptors.....	9
IV. Introduction to Competency based Training.....	9
A. What is Competency Based Training.....	9
B. Five Essential Elements of CBT System.....	10
C. Pillars of Competency Based Approach.....	11
D. Characteristics of CBT.....	12
V. Structure of Competency Standards.....	13
A. What are Competency Standards.....	13
B. Dimensions of Competency Standards.....	13
C. Components of Competency.....	15
D. Basic Competencies for Jobs.....	17
VI. Procedure in Developing Competency Standards.....	18
A. Identify Priority Jobs.....	18
B. Conduct Occupational/Job analysis.....	19
C. Develop draft of Competency Standard.....	19
D. Conduct validation of Competency Standard.....	21
VII. Packaging of Units of Competency.....	22
A. Guidelines for the packaging Units of Competency.....	22

VIII. ANNEXES.....24

1. Criteria for the Selection of Members of trade Working Group
2. Conducting Job Analysis
3. Preparing Statements for Components Competency Standard
4. Job Analysis
5. Occupational Profile
6. Job Analysis Process Flow
7. Job Profile
8. Packaging of Unit of Competency
9. Competency Map-Plumbing
10. Matrix of competency Automotive
11. Sample Unit of Competency
12. Template of the Unit of Competency
13. Standard Task Analysis Form
14. Competency Standards Validation Form
15. Function and Responsibility Map

I. INTRODUCTION

Our modern world is now characterized by globalization, fast technology change and labor flexibility/mobility. These phenomena drive business establishments and industrial enterprises to seek out workers who are capable of producing products and services to required standards.

In the local scene particularly the Technical - Vocational Education and Training Department (TVED) is facing the problem head on:

- *Difficulty in accessing Technical Vocational Education and Training (TVET) due to geographical location and poverty;*
- *Variations in the quality of institutions and provisions;*
- *Lack of accreditation /recognition of prior and current skills;*
- *Low level of teaching staff due to inadequate industrial experience;*
- *Inadequate methods of assessing trainee's achievement.*

The private training institutions as well are challenged to adapt a training system which will produce graduates with relevant competencies to meet the specific demand of employers. Since work requirements are also fast changing, it means making training services flexible enough to offer timely, appropriate and relevant programs to meet the development needs of workers and employers.

Hence the need to modernize training that will equip the growing workforce with relevant and quality skills to participate in the opportunities offered by the local and global labor market.

A training program which can be “customized or tailor made” allowing a variety of combinations, clear personal career development path with designated entry and exit points in the program is most desirable.

It was reported in one International Labour Organization (ILO) conference in 2008 that countries with competency and skills development aligned with key occupational sectors experienced higher level of productivity, and higher levels of employment growth.

Against this backdrop, the Strengthening Technical and Vocational Education and Training Project (STVETP) will provide technical support in the following:

- a) *Establish a system of competency standard setting to increase consistency, quality and mobility of credentials;*
- b) *Develop a relevant curriculum to fulfill the needs of the trainees and employers to achieve high level of preparation for work and further learning;*
- c) *Establish a system to assess persons without prejudice associated **with gender, class, ethnicity, disability or any other social factors**, and formally recognize prior and concurrent skills wherever it was acquired. However, the*

rationale for this addition being the fact that women usually acquire skills not through TVET formal study because of gender-related bias in education, but through actual work experience;

- d) Provide opportunities for individuals to choose programs based on their interest and access provisions;*
- e) Provide entry mechanisms to different training opportunities for various types of individuals especially those historically disadvantaged by such factors as gender, class, ethnicity, disability and health status;*

This manual contains guidelines that will help standard and curriculum developers establish and facilitate the formulation of Competency Standards for the different sectors of industry. The manual may also be used to develop competencies that are needed in the current job and to further develop competencies that are needed in the future jobs or to build upon competencies that are required to fulfil a need of a personal change in life career.

II. POLICY AND PROCEDURE

A. Purpose

This manual is designed to provide a systematic process for developing competency standards for jobs. It is also intended further to equip stakeholders, industry partners, vocational-technical institutions and trainers a shared understanding of the concept of 'Competency Based Training' (CBT) and the procedure on how competency standards for an industry sector is established. Thus, uniformity is assured in the process of establishing and utilizing competency standards for existing and future occupations.

B. Scope

The document shall cover an introduction to CBT, Lao PDR National Vocational Qualifications Framework (LNVQF), principles for setting competency standards, structure of the competency standards, the process of developing competency standards and the selection of applicable generic/key competencies.

C. Responsibility for the Authority, Implementation and Maintenance of the Contents of this Manual

The National Training Council – Permanent Office (NTC-PO) up on recommendation from the committee has the authority and responsibility for the review and updating of the contents of this manual.

The relevant division of the MOLSW and MOES may monitor the effectiveness of the procedure through regular review and reporting of the outcomes of the Quality Management Review Committee that is established as part of the TVET Quality Assurance.

The Office of the Director General TVED, MOES is responsible for the application and linking of the competency standards with all Technical Vocational Schools Curriculum while the Director General of the Skills Development and Employment Department (SDED), MOLSW will oversee the implementation/utilization of the competency standards in the Skills Development Centres under its supervision.

D. Guiding Principles in Competency Standards Setting

The following principles should guide the Trade Working Groups (TWG) tasked with developing competency standards:

- *The competency standard should be referenced to the Lao National Vocational Qualifications Levels that may be comparable with ILO's 'Regional Model of Competency Standards';*
- *The jobs for development should be endorsed by Trade Working Group of an industry sector and approved by the NTC-PO;*

- *The developers of the competency standards should be a tripartite body composed of representatives from the labor group, training providers and employers of the specified industry sector;*
- *The developed competency standards must relate to real activities conducted in the workplace to meet specific local industry requirements and attuned to the trends of the Asian region;*
- *All competency standards should be developed in a unified structure and format limited to what is critical or extremely necessary for job performance and referenced to the Lao National Vocational Qualifications Levels;*
- *The unit of competency is organized by a group of elements that are meaningful in the work process. The unit should not refer only to functions and/or job tasks, but also to the requirements of health and safety, quality and relationships at work (work related generic skills).*
- *The completed competency standard should be presented to a the NTC and/or quality control committee for endorsement.*

E. Benefits derived from using Competency Standards

- *Specific statement of objective and expected level of performance of the person is known before the program;*
- *The workers objective and the organizations are linked such that motivation is high;*
- *Individuals career development plan is facilitated and made effective;*
- *Competency standards assists management in establishing measurable and standardized system of performance evaluation in the organization;*
- *Competency standards enhance efficiency of the curriculum and effectiveness of the training program.*

F. Glossary of Terms

Competency – is the possession and application of the cluster of skills, knowledge and attitude required in the performance of a job in accordance to set industry standards.

Competency Standard – is the written specification of performance determined by industry which identify the skills, knowledge and attitudes essential for the successful performance of the job.

Unit of Competency – is the building block of the competency standard specifying the elements, performance criteria, range of variable, evidence guide, resources and methods of assessment. The competency unit can logically stand alone when applied in a work situation. The unit title is stated

in outcome terms for example: Service Ignition System or Overhaul an Engine.

Unit Descriptor – describes in broad terms the coverage of unit of competency. It is an expansion of the Unit title which states the general application of skills and knowledge.

Elements of Competency – are building blocks of a unit of competency which describes the key aspects of the job a person must be able to do relative to his role or function (e.g. Set-up Welding Accessories).

Performance Criteria – Is the specification of the level or quality of performance. It is also an indication of the quality of the critical evidence required to meet the outcomes in the elements and linked to assessment.

Range of Variables – are the specific range of application and conditions to which the performance criteria apply.

Evidence Guide – is the part in the competency standard that specifies the required evidence of competency including the critical aspects of competency and the standards to be observed. The underpinning knowledge and skills, context of assessment, methods of assessment, and resource implication are likewise stated.

National Certificate – is a document issued to an individual who have demonstrated successfully all the required units of competencies for a given qualification. Said document certifies that an individual is competent to perform a specific qualification.

Qualifications – is a cluster of significant units of competencies that meets job roles in the workplace. It is also a certification awarded to an individual who have successfully demonstrated his/her competence in a particular cluster of units of competencies. Qualifications represent the results of learning, regardless of whether learning has been in formal or informal contexts. The qualification level is distinguished according to its alignment with the levels of certification.

Trade Working Group - is a set of recognized expert practitioners from industry who are tasked to participate in competency standards setting.

Task Force – is a team of recognized experts representing an industry sector, vocational training institutions, and worker's association designated by the appropriate authority to participate in standards setting, curriculum and assessment instrument development.

III. THE ANTICIPATED LAO PDR NATIONAL VOCATIONAL QUALIFICATIONS FRAMEWORK (LNVQF)

The proposed/being established LNVQF is a quality-assured national system for the development, classification, recognition of competence acquired by individuals, irrespective of where and how the training or skill was acquired. Award of qualifications is given to persons who successfully demonstrated competencies through an assessment process.

The framework will need to be established to serve as a comprehensive, nationally consistent flexible framework for all qualifications in technical/vocational education and training. The framework will also have to indicate the comparability of different qualifications and how one can progress from one level to another.

LEVEL DESCRIPTORS

Qualification Level	Descriptors
Level V Advance Diploma	Can translate engineering designs and concepts into practical actions, supervise the skilled workers and perform work programming, calculations, and fine tuning of systems , work processes and equipment; ensure implementation of quality assurance
Level IV Diploma	Supervise the routine work of others; responsible for evaluation and improvement of work processes; analyze and troubleshoots occurring work problems; can perform whole of range of work at high level of competence including those involving technical decision-making, limited interpretation and execution of plans and work designs. Operates programmed/computerized production equipment
Certificate Level III	Can perform complicated fabrication work using complex/multi-function equipment, can work on jobs requiring minimal tolerance, responsible for the entrusted equipment , can solve work problems using basic methods, tools materials and information
Certificate Level II	Can operate simple/basic machines & equipment, interpret and make simple sketches/diagrams, perform repetitive tasks Can perform simple mathematical operations, calculations, estimates and do preventive maintenance on equipment and housekeeping.
Certificate Level I	Can apply basic factual information and skills to perform simple tasks requiring close supervision.

IV. INTRODUCTION TO COMPETENCY BASED TRAINING

A. What is Competency Based Training (CBT)?

CBT is an approach to training which is focused on the outcomes of learning. It addresses what the learners are expected to do rather than on what they are expected to learn about and the inputs to the process of learning.

CBT is designed to develop trainee's ability to use/apply basic and other skills in situations that are commonly encountered in the workplace. It includes the capacity to transfer and apply broad skills and knowledge to new situations and environments.

The goals of training in CBT are expressed in terms of precise and measurable descriptions of knowledge, skills, and behaviours/attitudes trainee must possess at the end of each training activity, while the entire curriculum in CBT may be broken into parts known as 'Modules of Instruction' with titles similar the title of the unit of competency. Each module may be separately learned, assessed and certificated.

In summary: The development of work skills is emphasized in CBT and mastery of those skills are assessed according to actual trainee performance in actual or simulated work situation. As compared to the traditional approach where time is fixed, achievement is variable and teacher centered.

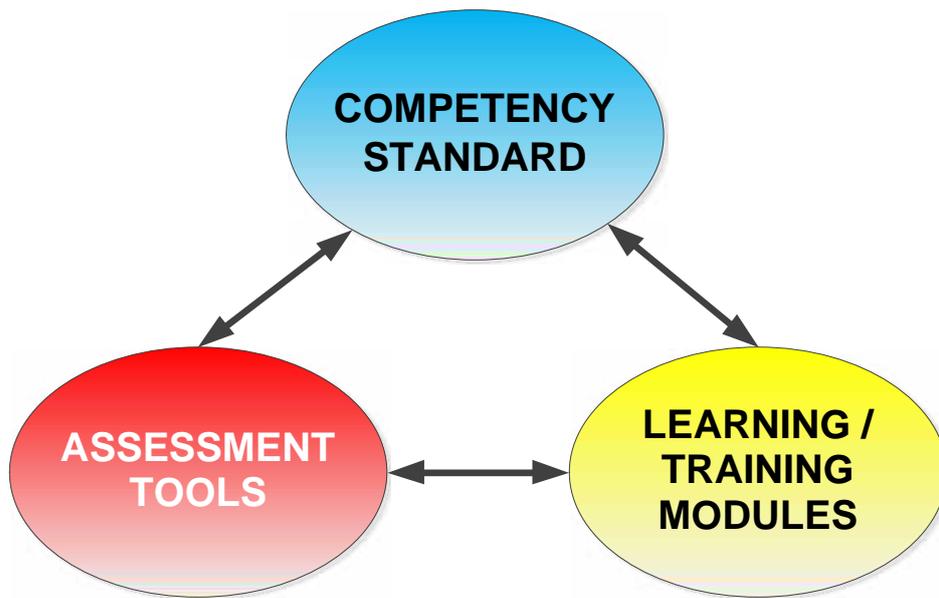
B. Five essential Elements of a CBT System

Norton (1987) describes five essential elements of a CBT system:

- 1) *Competencies to be achieved are carefully identified, verified and made public in advance;*
- 2) *Criteria to be used in assessing achievement and the Conditions under which achievement will be assessed are explicitly stated and made public in advance;*
- 3) *The instructional program provides for the individual and evaluation of each of the competencies specified;*
- 4) *Assessment of competency takes the participant's knowledge and attitudes into account but requires actual performance of the competency as the primary source of evidence.*
- 5) *Participants progress through the instructional program at their own rate by demonstrating the attainment of the specified competencies.*

C. Pillars of CBT Approach

The competency based approach to skills development stands on the three pillars as shown:



Where **Competency Standard** is defined as the written specification of performance determined by industry which identify the skills, knowledge and attitudes essential for the successful performance of the job;

Where **Learning/Training Modules** are the printed instructional materials used for providing the necessary technical information and learning exercises to the trainees. It guides the trainees on how the activities are done to develop the competencies defined in the competency standard. Learning materials in other forms may be provided to augment learning audio-video learning materials to facilitate learning. Where

Assessment Tools are the instruments used for gathering evidence to determine the achievement or possession of competencies by an individual;

D. Characteristics of CBT

The competency based training approach is characterized by the following:

- *The program contents are based on the skills and abilities needed by a person to meet job requirements;*
- *Provide knowledge, skills and attitudes in response to the industry competency requirements and needs;*
- *The performance criteria for each element of competency are specifically defined;*
- *Assessment is done throughout the course;*
- *Learner's progressive achievement of competencies is recorded and maintained;*

- *Assessment of participant's competencies is made as they enter the course. For those with acceptable performance in a required unit of competency, is exempted to take the unit.*
- *Training modalities/ methods are flexible and structured for individualized or customized instruction.*
- *Time for learning is flexible.*
- *Learning can take place in various forms and surroundings appropriate for achieving competence;*
- *Learners are provided with regular feedback to update his progress;*
- *Learners' existing levels of competence are taken into account or consideration through recognition of prior learning or recognition of current competency.*

V. STRUCTURE OF THE COMPETENCY STANDARDS

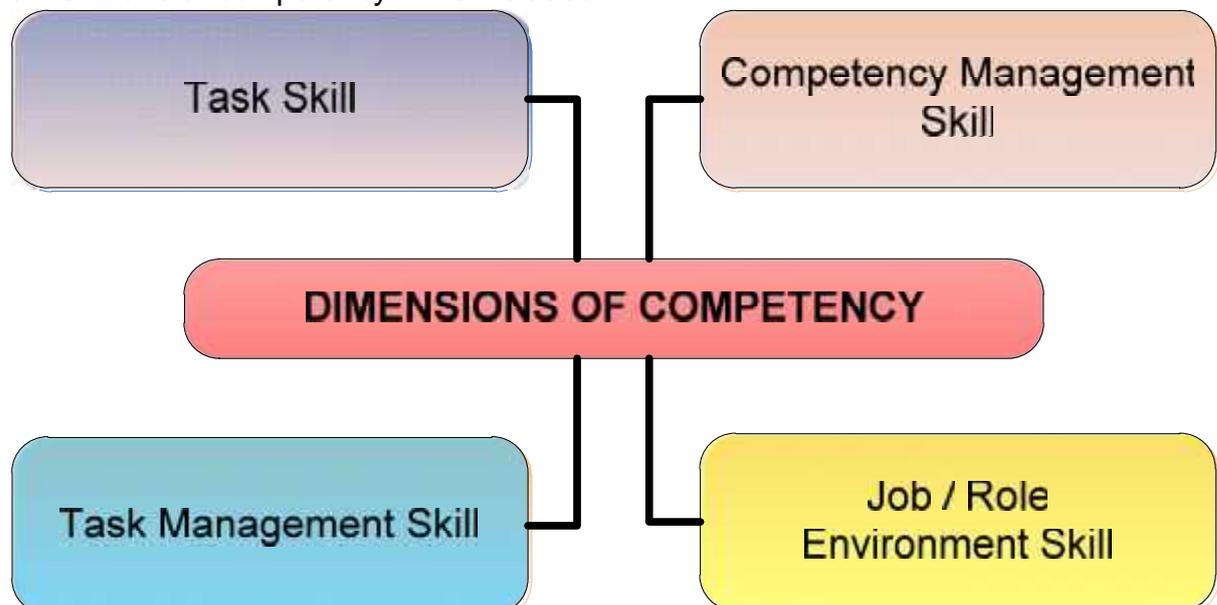
A. What are Competency Standards?

As defined competency standards are the written specifications of performance determined by industry which identify the skills, knowledge and attitudes essential for the successful performance of the job.

The value, of each Competency Standard is in the inclusion of the details of skills, knowledge, attitude and performance criteria to indicate achievement of competence and the specific evidence required to assess an individual's competence.

B. Dimensions of Competency

The concept of competency covers all aspects of work performance, known as the dimensions of competency. This includes:



Task Skills - are actions performed by the worker to accomplish his/her job. Example: 'Mix paint for the wall according to the customer's work order'.

Task Management Skill - are the skills used by workers to plan and integrate a number of different tasks to achieve complete work outcome. Example: 'Prepare weekly work schedule according to job order specification'.

Contingency Management Skills – are skills applied by a worker when there is machine breakdown or unforeseen event/s happen. Example: 'Secure service manual of machines to ensure immediate repair of the equipment when break down occur'.

Job Role / Environment Skill – this dimension encompasses the necessary skills, knowledge and attitudes to satisfy the social and environment-related responsibilities and expectations of the work environment including the capacity to work with others and adapt to different situations.

Examples can be:

- dispose used engine oil in accordance with the recommended manner of disposal by the product manufacturer or according to the waste management policy of the company,*

C. Components of Competency Standard

Each Competency Standard includes details of the skills, knowledge, attitude and performance criteria to indicate competence and specific evidence required to assess an individual's competence. The parts are:

1. Unit Title

Is a statement that refers to the relevant unit of competency necessary to perform a given task. It is stated in outcome terms.

Example: *Receive production work order*

2. Unit Descriptor

Describes the scope of the unit of competency in terms of knowledge, skills and attitudes. It is an expansion of the Unit Title which states the general application of skills and knowledge and attitude on the job.

Example: *This unit covers the knowledge, skills and attitudes required to set-up the machine. The unit includes the receiving / securing the Production work order, loading the block, and setting appropriate machine operation.*

3. Elements

Are the basic building blocks of the unit of competency that describes in precise language the actions or outcomes that can be demonstrated by the person who works in a specified job area.

Example: *1.Receive production work order; 2. Load the block; 3. Set Appropriate Machine Operation; 4. Adjust the position of the blade. Etc.*

4. Performance Criteria

Are the specifications of the level or quality of performance. It is also an indication of the quality of the critical evidence required to meet the outcomes in the elements.

Example: *Work is undertaken safely in accordance with the workplace standard procedures. Delivery date is determined from the production work order / sales order.*

5. Range of Variables:

Is a description of the circumstances or context in which the work is to be performed. It also indicates what is made available or provided to carry out the activities of the job.

Example:

- a) *Supplies and materials required*
- b) *Tools and equipment*
- c) *Quality assurance requirements*
- d) *Occupational health and safety*
- e) *Personal Protective equipment*

6. Evidence Guide:

Is the part in the Competency Standard that specifies the required evidence of competency including the critical aspects of competency and the standards to be observed? The underpinning knowledge and skills, context of assessment, methods of assessment, and resource implication are likewise stated. The *evidence guide* relates directly to the elements, performance criteria and range of variables defined in the unit of competency. Its purpose is to guide the assessor in the collection of evidence.

Example of Critical aspect of Competency: *Appropriate personal protective equipment is worn in line with the job requirement and standard operating procedures.*

D. Basic Competencies for a given Job

The basic competencies are those that apply to all types of human undertaking particularly in the working environment. We can observe from the execution of tasks, the worker utilizes a range of general skills and abilities. For example: *communication, numeracy/applied mathematics, interpersonal relationships, working with others (teamwork), work planning and organizing, problem solving, etc.*

These competencies are called by different names such as **generic skills, key competencies, life skills, etc.** In this manual we will simply call them basic competencies for jobs to emphasize the fundamental nature of the competency and the support it renders to the execution of tasks skills.

Gender and Social Equity in the Workplace is a fundamental component of CBT. It describes the knowledge, skills and attitudes required to apply principles and policies on gender and social equity, essentially contributing to positive and productive work environment.

This covers the following: complying with guidelines related to gender and social equity in the workplace; enhancing the promotion of gender and social equity in the workplace; and recognizing and preventing gender abuse and other forms of social inequities.

VI. PROCEDURE IN DEVELOPING COMPETENCY STANDARDS

In order to attain consistency and standardize the development of relevant and valid competency standards the following procedures are hereby undertaken:

A. Identify priority jobs from the given occupational area.

The national economic development plan of government is the anchor document for the identification of the priority area/sector for developing competency standards. In some cases initiation from industry sector leaders may be entertained after considering factors like attrition of workers, implementation of new technologies movement of workers of the country.

Under this STVET Project there are four occupational areas identified for development of competency standards, competency based curriculum and assessment. These are Construction and Building Trades, Furniture Making, Mechanical and Machinery Maintenance and Repair, Basic Business.

Of course, more industry sector will require the development of additional competency standards, which will have to be identified by NTC-PO.

B. Conduct occupational / job analysis

The first order of work is to develop the occupational map. This is the identification of the different jobs belonging to the identified occupational area. After agreeing on the different jobs in the occupational area, the TWG's members identify the tasks that make-up/contained in the job.

This activity should be facilitated by an experienced/ trained job analysis facilitator. After completion and agreements has been reached the facilitators and the participants prepare the job-task map.

C. Develop draft of Competency Standard

Before drafting/formulating the statements in the competency standards template/form (see Annex), the TWG will have to review the job-tasks map, since the Units of Competencies are equivalent to task identified in the job analysis. The steps that follow are:

- i. Formulate the description of the Unit of Competency, which is labelled the Unit Descriptor in our framework.*

- ii. *Identify the Elements of Competency; these are steps of work in logical and sequential order that will have to be performed with one unit and/or tasks. These steps of work/elements of competencies are derived from the result of the job analysis.*
- iii. *Specify the level or quality of work performance; we call this the Performance Criteria;*
- iv. *Identify the Range of Variables – these are the conditions wherein the task is undertaken. These may be events, situations, locations, occupational and health regulations, laws, etc.*
- v. *Describe the evidences and methodology of assessment that will prove achievement of competencies. These are called the Evidence Guide. The parts of the Evidence Guide are:*
- vi. *Critical Aspect of Evidence – are indication of compliance with any of the following: industry practices and procedures, occupational health and safety practices, correct procedure in setting up of equipment and work piece, correct procedures in handling tools, materials and equipment, identifying faults and problems that occur and the necessary action to rectify, communication with others to ensure safe and effective workplace operations, and finish of work according to specification. These are the facets of competency which show a strong evidence of competence.*
- vii. *Identify the Underpinning Knowledge, refers to the essential technical information the worker must know and understand to carry out the activities defined in the unit of competency*
- viii. *Identify Underpinning Skills that are the necessary practical and cognitive skills to match the performance criteria defined in each element of the unit of competency.*
- ix. *Describe the Resource Implication – this refers to the conditions of work, working environment, tools, equipment, and materials, necessary for achieving successful performance of the unit of competency.*
- x. *Identify the Methods of Assessment. This is determined by the need to cover all aspects of the unit. The method chosen may be undertaken for a period of time or it could be a one day activity, depending to the level of complexity/difficulty of the unit of competency being assessed.*

D. Conduct Validation of the Competency Standard.

Validation of competency standards is conducted to ensure the alignment of competencies to the requirements of industry and its overall policy and regulatory context. The set standards should be an accurate representation of the real workplace situation to guarantee the employability of TVET graduates.

Therefore, the different components of the competency standards have to be examined very cautiously to make sure they match the expected performance ability needed by the industry.

In addition, the standards are the basis for designing and developing appropriate and relevant competency-based curriculum and learning materials.

The respondents to take part in the validation process should be selected from members of the National Training Council-Permanent Office (NTC-PO) and from industry who were not participants in the standard setting activity (TWG) workshops, relevant training providers, and worker's representative from recognized industry associations. The selection process should ensure representation of women in the respective trade areas. The validation process may be done in the following manner:

- *conducting a validation workshop with all key stakeholders mentioned above;*
- *distribution of advanced copies of the standard for comments;*
- *conducting a verification workshop.*

The Trade Working Group members should be present to answer questions and clarifications, if and when required. NTC-PO will endorse the final draft of the competency standards and submit it through channels to the relevant Minister for final approval.

VII. PACKAGING OF UNITS OF COMPETENCY INTO QUALIFICATION LEVEL

A number of significant units of competency are combined to form a **Qualification** that is linked to the job requirements. The group of competencies are aligned to the level descriptors.

Qualifications may be described as the structure of standards, levels, and processes, intended to regulate and improve the provision of training and achievement of competence. It contains a set of significant units of competency that meets the job level in the workplace. Because the demonstration of performance of the units of competencies in accordance with the specified criteria is the basis for the issuance of the certificate of competency, thus gaining the required **Qualification** for the job.

A. Guidelines in Packaging Units of Competencies

In order to obtain consistency and accuracy in packaging units into qualification levels, the following points should be observed:

- *The completion of the set of competencies should provide an opportunity for the individual to find employment in relation to his level of qualification;*

- *Align each grouping of units with the level descriptors as specified in the qualification framework;*
- *Describe the units of competency found in the competency map as **Basic, Common and Core**, and packaging them accordingly.*

NOTE:

The **Basic/Generic Competencies** are those that are found in the listing of Basic Job Competencies in this manual. These are units applicable to all industries which underpins the performance of the job roles/functions in the workplace. These competencies are part of the so called key competencies, or life skills competencies as found in other training literatures.

The second group is called **Common Units of Competency**. These are competencies found appearing in almost all the identified job. These common units should be bundled together with the core and basic competencies. of a given job. This group of units of com petencies are required in most jobs in a given occupational area.

The third group of units are the **Core Units of Competencies**. These are job specific units essential in the performance of the main function of a given job role. In most cases these core units are applied only in one particular job role.

ANNEXES:

- Annex 1:** Lists proposed criteria for selecting Trade Working Group (TWG) members.
- Annex 2:** Depicts Occupational Profiling: '*Identification of Jobs*'
- Annex 3:** Depicts a Competency May Civil Works: Sub-sector 'Plumbing'
- Annex 4:** Examples of statements for the components that make up competency standard.
- Annex 5:** Competency Standard Validation Instrument
- Annex 6:** Example Competency Unit OHS
- Annex 7:** Depicts Packaging of Units into Qualifications.
- Annex 8:** Standard Setting Organisational Map

**PROPOSED CRITERIA FOR SELECTING MEMBERS TO ESTABLISH
THE COMPETENCY STANDARD SETTING COMMITTEE
THAT IS: Trade Working Group (TWG)**

- Members of the TWG should possess a solid knowledge base of Competency Based Training (CBT) in general and in the approach and methodology in competency based standard setting.
- Members of the TWG should be familiar with the occupation and/or job being analysed.
- Members of the TWG should be committed to the development work anticipated and finds time and/or being released by his employer to attend the scheduled regular TWG meetings.
- Selected and nominated TWG member should possess a good knowledge of team work and inter-personnel relations in order to be able to interact harmoniously and be persuasive without dominating the discussion.
- Members of the TWG should be able to explain during deliberation in precise and clear language his/her ideas.

OCCUPATIONAL PROFILING: *'Identification of Jobs'*

BUILDING FINISHERS

ROOFERS

FLOOR LAYERS AND
TILESETTERS

PLASTERERS

INSULATION
WORKERS

GLAZIERS

PLUMBERS AND
PIPE FITTERS

BUILDING
ELECTRICIANS

COMPETENCY MAP: Civil Works
Sub-sector: Plumbing

ANNEX 3

CORE COMPETENCIES	Install architectural ceiling, wall sheets/panels/boards and floor	Perform plumbing repair and maintenance works	Perform complex and multi-story plumbing installation and assemblies	Prepare tools, painting materials and equipment	Apply special cement finishes to concrete and masonry surfaces	Install hot and potable chilled water-piping system	Install framing works
	Install stair components and/or pre-fabricated stair assembly	Install built-in and/or pre-fabricated cabinets	Perform minor construction works	Repair defective concrete and masonry surfaces	Install formwork components	Strip form work components	Draft plumbing design
	Fabricate/Install door /window jambs and panels	Perform single unit plumbing installation and assemblies	Plaster concrete/masonry surfaces	Install pre-cast balusters and handrails	Perform basic masonry works	Perform mixing/tinting of color paints	Perform painting repair work
	Prepare masonry materials	Lay brick/ block for structures	Conduct pipe leak testing	Make piping joints and connections	Fabricate form works	Prepare pipes for installation	Estimate paint requirements
COMMON COMPETENCIES	Prepare construction materials and tools	Perform mesurations and calculations			Stakeout building lines	Perform painting works	Prepare surface for painting
	Maintain tools and equipment	Observe procedures, specifications and manuals of instructions					
BASIC COMPETENCIES	Receive and respond to workplace communication	Practice basic housekeeping procedures	Demonstrate work values	Work with others	Work in a team environment	Practice professionalism	Practice occupational health and safety procedures
	Lead workplace communication	Solve problems related to work activities	Promote environmental protection	Utilize specialist communication skills	Use relevant technologies	Develop team and individual	Lead small team
	Develop and practice negotiation skills	Plan and organize work	Practice workplace communication	Collect and organize information	Apply problem solving techniques in the workplace	Use mathematical concepts and techniques	

STATEMENTS FOR THE COMPONENTS OF THE COMPETENCY STANDARD

The formulation of the statements for the components of the competency standard must be clear and specific so that the curriculum developers, trainers, trainees and assessors will be able to interpret the standards accordingly and as described hereunder:

1. **State the Unit Title** – must be descriptive of the scope of the activities, knowledge, skills and attitudes and the expected product, decision or service. It must be expressed in outcome terms.

Example: a) *Set up the machine* b) *Check the machine*

2. **State the Unit Descriptor** - is the scope of the unit of competency in general terms of knowledge, skills and attitudes required for effective performance. The descriptor must provide additional information relating to the units objective. The statement therefore of the unit descriptor must be written in a way that will accurately and clearly reflect the objectives and outcome.

Example: *This unit covers the competence required to set-up the machine. The units includes the receiving / securing the production work order, loading the block, and setting and adjusting machine parts according to work order requirements.*

3. **Identify the Elements of Competency** - describe in precise language the demonstrable and assessable actions or outcomes by the person who works in a particular area of work. It has to be logically listed as the end of it is the achievement of the unit of competency.

<p>Example Elements of CU:</p> <p><i>'Set up the Machine'</i></p>	<ol style="list-style-type: none"> 1. Receive Production Work Order 2. Load the block 3. Set Appropriate Machine Operation 4. Adjust the position of the blade 5. Adjust displacement of the Machine 6. Adjust the Limited Switch 7. Set the Depth of Cutting 8. Adjust the speed of the machine 9. Set the amount of water / air / oil pressure 10. Check the amount/level of water
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- 4. Specify Performance Criteria** – state specifically the knowledge, skills, attitudes and the required level of performance that will provide evidence that competence has been achieved.

Example:

- ☑ *Work is undertaken safely in accordance with the workplace and standard procedures.*
- ☑ *Production work order is received from the department head based on work place practice.*
- ☑ *Checked the quantity dimension and material of product to be produced according to customer's order.*
- ☑ *Identified the sales order number from the production work order.*
- ☑ *Delivery date is determined from the production work order / sales order.*
- ☑ *Completed work is in accordance with the manufacturer's specifications and workplace standard.*

- 5. Determine Range of Variables** – identify the range of context to which the performance criteria will apply. By contextualizing it is meant “setting the boundaries of the standard” by indicating the following:

- *Supplies and materials required*
- *Tools and equipment*
- *Quality assurance requirements*
- *Occupational health and safety*
- *Personal Protective equipment*

Variables	Range Statement
1. Sources of information	<ul style="list-style-type: none"> ✓ Machine operation instruction manual ✓ Machine repair and service manual ✓ Production manual/guide ✓ Production work order ✓ Company related memorandum orders

- 6. Prepare the Evidence Guide** – statements of the evidence guide must relate to the performance criteria and the range of variable. It must lead the trainers and assessors on the appropriate context and scope of the competency application. The evidence guide must contain the following:

6.1 Critical aspects of evidence – it is essential that competence is demonstrated in compliance to industry practices, occupational health and safety requirements, procedures in handling tools, equipment and materials, contingencies at work and communication with others. Determine in which of the above where the critical aspect of evidence must be demonstrated.

- *Appropriate **personal protective equipment** is worn in line with the job requirement and standard operating procedures.*
- *Switched-off the main circuit breaker of the machine prior to testing/checking in accordance with the workplace standard operating procedure.*
- *Electrical components and wirings are checked and tested in accordance with manufacturer's instructions and specifications.*
- *Normal electrical power supply voltage and current of the machine are checked and measured according to standard specification.*
- *Correct set-up/installation, tightness and segment condition of the blade/disc are checked and fixed according to the manufacturer's standard*

7. List Underpinning Knowledge and Attitude – list the technical information and subjects that are needed to be learned so that the trainee will have a broad base of knowledge of the job.

Example:
'Underpinning knowledge'

- Electrical system of machine
- Parts of the machine
- Machine operation/service manual and specifications
- Machine lubrication system
- Operation of compressor
- Air supply system
- Testing and repair of air lines and accessories
- Reading of pressure gauge
- Component of water supply / lines
- Testing and repair of water lines, fittings and valves
- Water flow meter and pressure gauge

8. **List Underpinning skills** – list down the vital skills to fulfil the performance criteria in the elements of the units of competency.

<p>Example: <i>'Underpinning Skills'</i></p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Interpreting the content of the production work order <input checked="" type="checkbox"/> Loading the block <input checked="" type="checkbox"/> Setting appropriate machine operation <input checked="" type="checkbox"/> Adjusting the position of the blade <input checked="" type="checkbox"/> Adjusting the displacement of the machine
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9. **Resource Implication** – describe the condition and the type of working environment including list the resources like tools, equipment, supplies and materials so that successful performance in training and assessment is achieved.

<p>Example: <i>'Resource Implication'</i></p>	<p>The following resources MUST be provided: Workplace or fully equipped venue with necessary tools and equipment as well as consumable materials which include: apron, gloves, goggles, safety shoes, machines, crane, trolley, vertical and horizontal disc, meter tape, transfer table, wrenches, pipe wrench, screw drivers, water pressure gauge, oil pressure gauge, air pressure gauge, air regulator, limit switch, block, raw materials and production work order to achieve the requirements of this unit of competence.</p>
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10. **Determine the Methods of Assessment** – analyse the coverage of the unit whether assessment must be conducted over a period of time or in a particular method to ensure that the scope the unit is adequately covered and consistency in performance is demonstrated.

<p>Example:</p> <p><i>'Methods of Assessment'</i></p>	<p>Competence will be assessed through:</p> <ul style="list-style-type: none"> ➤ Theoretical Assessment ➤ Written Test ➤ Oral questioning / Interview ➤ Practical assessment ➤ Direct observation ➤ Demonstration
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11. Describe the Context of Assessment – state the place and condition where assessment will be undertaken. Assessment may be held in the workshop of an accredited training centre whether public and private, and facility of a partner industry.

<p>Example:</p> <p><i>'Context of Assessment'</i></p>	<ul style="list-style-type: none"> ➤ Competence may be assessed in the work place or in a simulated work place setting. ➤ The unit of competency should be assessed in conjunction with other relevant unit in this occupation.
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OCCUPATIONAL AREA

JOB TITLE

COMPETENCY STANDARDS VALIDATION INSTRUMENT

Part I – deals with more detailed and in-depth analysis of the CS being reviewed. This is done in order to obtain important notes, which would greatly affect the validity of this material.

1. What other **job title/s** is/are related to this competency standard?

2. Are the identified **Units of Competency** in conformity or relevant to the requirements of the job? Does it satisfy the criteria for a Unit of Competency? If your answer is NO, what other Unit/s of Competency may be added/deleted/rephrased?

3. Does the **Unit Descriptor** clearly describe the scope (knowledge, skills and attitude requirements) and level of performance of the identified Unit of Competency? If your answer is NO, please state your comments/suggestions:

4. Are the **Elements** descriptive of the action of the outcomes and appropriate to the performance of the identified Unit of Competency? If your answer is NO, please state your suggestions/observations:

5. Are the **Performance Criteria** for each element of competency clearly and precisely stated to describe how well a competent person should perform the task? If your answer is NO, please state your suggestions/recommendation and for which particular element?

6. Please study the Range of Variables of each Unit of Competency and rate (5-best, 0-worst) or comment on its content

	RELEVANT	COMPLETE	CORRECTLY STATED	Other comments, pls.
Items to be used				
Office & Planning Materials				
Tools & Equipment				
Quality Assurance				
OHS Requirement				
Personnel Protective Devices				
Other variables				

7. Please study the Evidence Guide of each unit of competency and rate (5-Best 0- worst) or comment on its content

	RELEVANT	COMPLETE	CORRECTLY STATED	Other comments, pls.
Critical Aspect of Evidence Considered				
Underpinning Knowledge and Attitude				
Underpinning Skills				
Resource implication				
Method of Assessment				
Context for Assessment				
Other Evidences				

Part II- Overall impression/comment on the CS

After having gone over the draft Competency Standard carefully, what is your overall rating as to its acceptability and validity based on the scale below. Please check one number only

5	4	3	2	1	0
100%					Totally
Valid					unacceptable

ANNEX 6

UNIT 1 APPLY OCCUPATIONAL HEALTHS & SAFETY REQUIERMENTS

Unit Code	723.7231.122.004.01
Unit Descriptor	This unit of Competency covers the Skills, Knowledge and Attitudes for Occupational Health & Safety (OHS) within any sector of the automotive industry.

UNIT 1 Elements & Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA Italicized terms as elaborated in the Rang of Variables
<i>1. Identify & assess risks</i>	<p>1.1 Hazards in the work area are identified, assessed and reported to designated personnel.</p> <p>1.2 Safety risks in the work area are identified, assessed and reported to designated personnel.</p> <p>1.3 Safe work practices, duty of care requirements and safe work instructions are followed for controlling risks.</p> <p>1.4 OHS, hazard, accident or incident reports are contributed to according to workplace procedures and National OHS legislation and relevant information</p>
<i>2. Identify hazardous materials & other hazards</i>	<p>2.1 Hazardous materials on a work site are correctly identified and, if appropriate, handled and used according to company and legislated procedures.</p> <p>2.2 Measures for controlling risks and construction hazards are applied effectively and immediately.</p> <p>2.3 Hazardous materials that have safety implications for self and other workers are secured immediately they are identified, using appropriate signs and symbols.</p>
<i>3. Plan & prepare for safe work practices</i>	<p>3.1 Correct personal protective equipment and clothing for each area of automotive work are identified, worn, correctly fitted, used and stored according to enterprise procedures.</p> <p>3.2 Selection of tools, equipment and materials, and organization of tasks are performed in conjunction with other personnel on site and in accordance with enterprise procedures.</p> <p>3.3 Required barricades and signage are determined and erected at the appropriate site location.</p> <p>3.4 Material safety data sheets (MSDS), and job safety</p>

	analysis (JSA) and safe work method statements relevant to the work to be carried out are identified and applied
4. Apply safe work practices	<p>4.1 Tasks are performed in a manner that is safe for operators, other personnel and the general community in accordance with legislative requirements, and enterprise policies and procedures.</p> <p>4.2 Plant and equipment guards are used in accordance with manufacturer specifications, work site regulations & standards.</p> <p>4.3 Procedures and relevant authorities for reporting hazards, incidents and injuries are used.</p> <p>4.4 Work site safety signs and symbols are identified and followed.</p> <p>4.5 Work site area is cleared and maintained to prevent and protect self and others from incidents and accidents and to meet environmental requirements</p>
5. Follow emergency procedures	<p>5.1 Designated personnel are identified in the event of an emergency for communication purposes.</p> <p>5.2 Safe workplace procedures for dealing with accidents, various types of fire and other emergencies are followed, including identification or use, if appropriate, of fire equipment within scope of responsibilities.</p> <p>5.3 Emergency response and evacuation procedures are known, practiced and carried out effectively when required.</p> <p>5.4 Emergency first aid treatment of minor injuries is carried out correctly and details of any treatment administered are reported accurately to designated personnel as soon as possible</p>

UNIT 1 Range of Variables

VARIABLES	RANGE
1. Hazards	<p>Hazards include but are not limited to;-</p> <p>1.1 Chemical spills</p> <p>1.2 Work in confined spaces</p> <p>1.3 Trenches, excavations, workshop pit</p> <p>1.4 Falling objects</p> <p>1.5 Gasses, fires</p> <p>1.6 Hazardous materials</p>

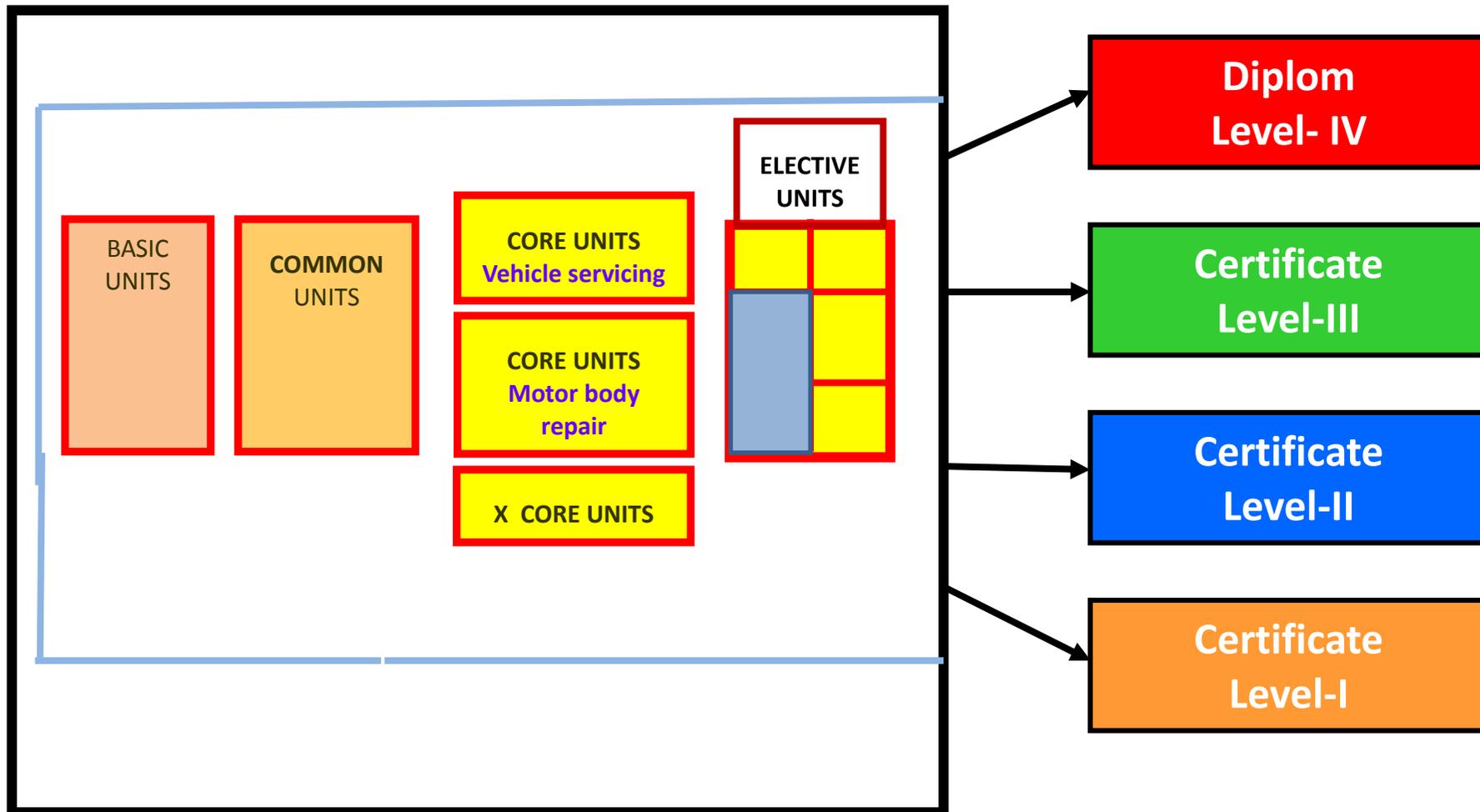
	<ul style="list-style-type: none"> 1.7 Extreme temperatures 1.8 Infectious diseases 1.9 Handling & moving equipment 1.10 Overhanging, protruding, sharp objects 1.11 Noise, dust, vapors 1.12 Uncontrolled site traffic 1.13 Working at heights
2. Designated persons	<ul style="list-style-type: none"> 2.1 Safety officers 2.2 Managers, supervisors 2.3 Materials handling licensed persons
3. Safe work practices	<ul style="list-style-type: none"> 3.1 Observing OHS practices 3.2 Risk assessment & emergency procedures 3.3 Use of fire-fighting equipment
4. Duty of care requirements	<ul style="list-style-type: none"> 4.1 Protect others from harm 4.2 National OHS regulations
5. Incidents	<ul style="list-style-type: none"> 5.1 Accidents resulting in personal injury, damage to property 5.2 Events on site that require assessment and action
6. OHS legislation, regulations and codes	<ul style="list-style-type: none"> 6.1 Current National OHS regulations 6.2 Current Provincial OHS regulations 6.3 Current enterprise safety policies and procedures 6.4 Current Company/manufacturer/component supplier OHS manual/handbook/user guide requirements
7. Information, signs & symbols	<ul style="list-style-type: none"> 7.1 Visual displayed symbols, tags, signs, instructions 7.2 Event reporting documents 7.3 Safety meeting records
8. <i>Hazardous materials</i>	<ul style="list-style-type: none"> 8.1 Petrol, diesel, gas fuel 8.2 Exhaust gas 8.3 Welding gas 8.4 Oil 8.5 Color 8.6 Cleaning chemicals, solvents 8.7 Glues 8.8 Asbestos
9. <i>Risk control measures</i>	<ul style="list-style-type: none"> 9.1 Elimination, substitution, isolation 9.2 Management control 9.3 Personal Protective Equipment

<p><i>10. Personal Protective Equipment (PPE)</i></p>	<p>Including but limited to:</p> <p>10.1 Aprons, arm guards, caps, dust masks, respirators, ear muffs, ear plugs, gloves, hard hats, reflective vests, jackets, overalls, safety glasses & goggles, steel capped boots, UV protective clothing & sunscreen</p>
<p><i>11. Tools, equipment and materials</i></p>	<p>Including but not limited to:</p> <p>11.1 Fire-fighting equipment 11.2 Breathing apparatus 11.3 First aid kit 11.4 Ladders & work platforms 11.5 PPE</p>
<p><i>12. Emergency procedures</i></p>	<p>Including but not limited to:</p> <p>12.1 Contact numbers, names and locations 12.2 Procedures for local emergency services</p>

UNIT 1 Evidence Guide

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Locate, interpret & apply relevant information, standards & specifications 1.2 Comply with a safety site plan & National & organizational OHS policy/procedures. 1.3 Implement required safety actions relevant to a range of situations & in line with OHS policy and procedures</p>
<p>2. Underpinning Knowledge and attitudes</p>	<p>2.1 Basic first aid procedures 2.2 OHS and Construction Terminology 2.3 Knowledge of OHS communication & visual display methods including signage 2.4 Emergency response & evacuation procedures</p>
<p>3. Underpinning skills</p>	<p>3.1 Recognize & respond effectively to a range of Hazardous situations in the required manner 3.2 Deal with hazardous situations as part of a team 3.3 Communicate & report hazards & risks using a range of technologies suitable to the work environment 3.4 Identify & report faults in tools, equipment and facilities. 3.5 Current OHS legislation & required safety clothing & equipment 3.6 Safe use of construction tools, materials & equipment</p>

<p>4. Resource implications</p>	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> 4.1 Induction procedures 4.2 Realistic or simulated tasks covering mandatory OHS requirements 4.3 Relevant specifications & work instructions 4.4 Tools & equipment appropriate to applying safe work practices 4.5 Support materials appropriate to activity 4.6 Workplace instructions relating to safe work practices 4.7 Material safety data sheets 4.8 Research resources
<p>5. <i>Method of assessment</i></p>	<p>Competency in this Unit should be assessed through:</p> <ul style="list-style-type: none"> 5.1 Satisfy endorsed Assessment guidelines 5.2 Include direct task observation in real or simulated conditions 5.3 Questioning to clarify competency observations 5.4 Provide evidence that is Sufficient & Valid 5.5 Take account of cultural, and disability variations <i>Evidence provided for competency determination will be Valid, Sufficient & Current</i>
<p>6. <i>Context for assessment</i></p>	<ul style="list-style-type: none"> 6.1 Competency should be assessed in the workplace or simulated environment. 6.2 Assessment must be undertaken in accordance with Lao PDR CBT assessment guidelines



STANDARD SETTING ORGANISATIONAL MAP

