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**National Competency Standard (NCS) development Guide
National Vocational Qualifications System (NVQS)**

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Introduction

NSTB with the support of NVQS is on the process of endorsement of NVQF. The NVQF is a mechanism to define the occupational skills requirements in employment (in the form of competency standards), to assess learners/practitioner according to these standards and to award vocational qualifications to learners/practitioner who prove that they meet the standards (certification). Need further elaboration

National Competency Standard (NCS) contains:

- A Sector Map (SM)
- A Competency Profile (CP), developed by expert practitioners that contains units and elements of competencies (tasks) expected to be performed by someone having the related vocational qualification/experiences in the world of work.
- Performance Standard set by the experts in the field will be the basis for evaluating the performance of the test taker for the certification.
- Task performance requirements (tools, equipment, materials) for exhibiting the competencies
- Occupational health and safety to be considered at the time of performance
- Technical knowledge that require for the successful performance
- Range of variables that describes the different possible condition of the performance.

This document focuses on the various processes used to develop National Competency Standard (NCS). These processes, along with their respective products and elements, are shown on the chart below.

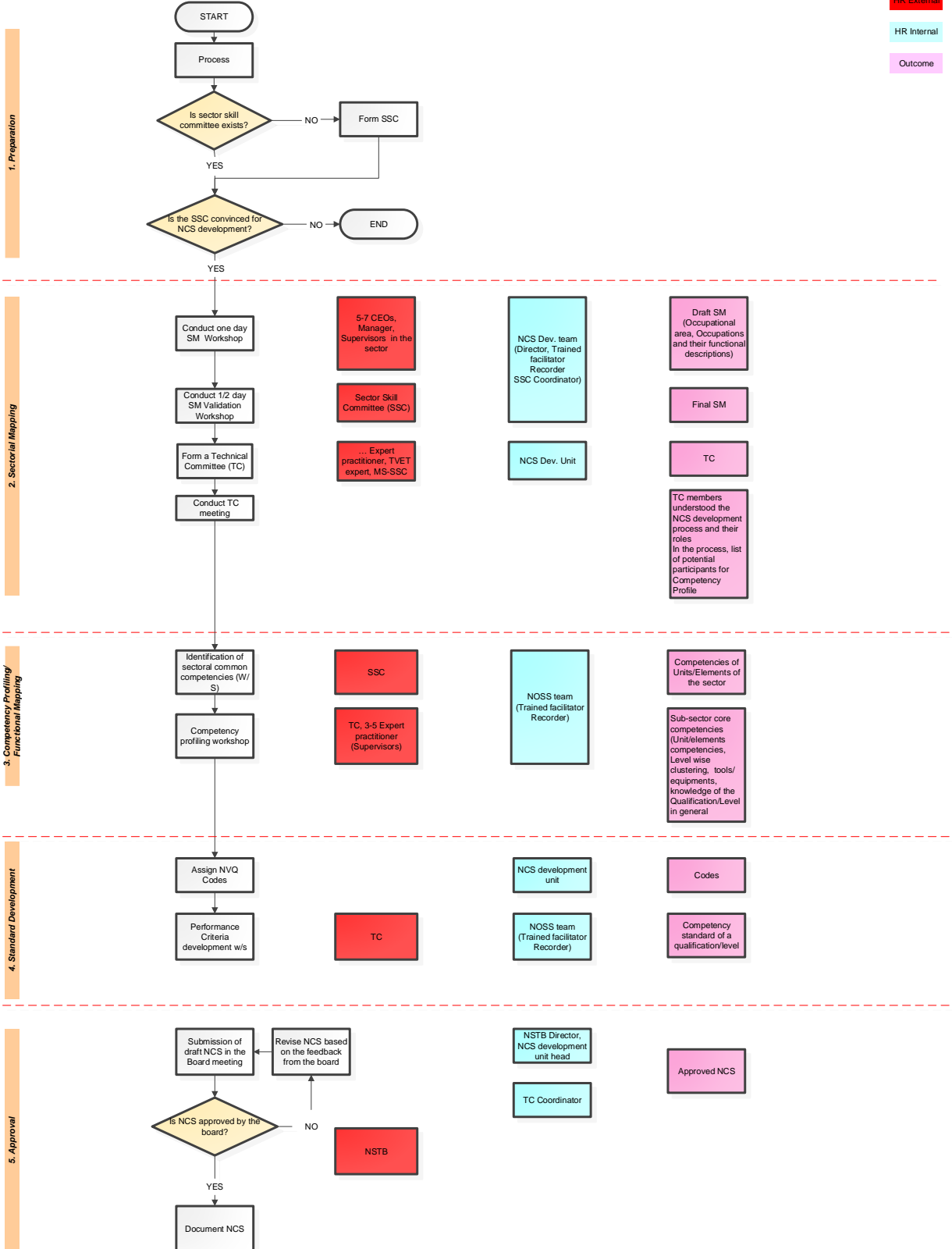
Process Map

NCS Development Process

HR External

HR Internal

Outcome



Purpose of the Toolkit

The purpose of the Toolkit is to create a common understanding on the methodology of developing NCS among the NSTB staff members and other relevant stakeholders. The specific purpose is to:

- establish NSTB process for developing NCS,
- ensure the quality of NCS through maintaining the standard processes of NCS development,
- build the capacity of NSTB in competencies required for NCS development.

NCS development stages

Stage 1: Initiation

Once the decision is made for developing NCS based on the result of the needs assessment or upon request by relevant organization/agencies, NSTB starts preparation for development of National Competency Standard (NCS). Preparatory works include:

- Formation of Sector Skill Committee (SSC) if not exists
- Approval of NCS development by the SSC
- Technical Committee (TC) formed by the SSC (Identification of relevant industries/companies and expert practitioners)
- Prepare a tentative NCS development plan

Stage 2: Sectoral Mapping

The development of Sector Map (SM) is done by involving relevant experts (CEO/Managers/supervisors of industry, representative professional associations, at least one representative from each sub-sector) from the world of work. The development process is done in a workshop setting facilitated by a trained Competency Standard Development Facilitator.

Stage 3: Competency Profiling

Competency profile is developed for each sub-sector separately. It consists of key functions, functions and elements of competencies require in an occupation or for certification. One or more functions are combined for different level of qualification. Development of competency profile will be done in a workshop with TC members and 3-5 expert practitioner from the sub-sector which is guided by a trained facilitator. The workshop identifies functions and elements of competencies and additional information like required knowledge, related skills and tools/equipment.

Stage 4: Standard Development

TC members are oriented on development of Performance Standards/criteria and details of competency standard by a trained facilitator. At least for one unit of competencies is developed during the orientation. The development of remaining standard/criteria are assigned to selected competent expert from the TC member. The draft standard is then presented to the Sector Skill Committee for its endorsement.

Stage 5: Approval

Obtain approval to implement the NCS from National Skill Testing Board (NSTB). Follows official procedures.

Key Processes

1. NCS development initiation

The idea or request for a new NCS development/revision may come at any time from either inside (labor market survey conducted by CBS/NSTB/CTEVT) or outside the system (request from Technical Training Providers (TTPs), Development agencies, Industries, Public organizations).

It is important that, at the time of the initial request, as much data as possible be obtained from the requester (who, what, when, where, why). The NCS Development unit head in collaboration with the SSC chairperson will prepare a discussion memo of the request. This document is used to begin internal discussions about the findings or request. The memo should address the following questions:

- Who was the client?
- By when should it be done?
- Is the sector map available?
- Are sectoral/occupational experts available and willing to contribute?
- Can skill testing be conducted?
- Is conducting test financially viable (e.g. Jewelry sector) ?
- Is references of international practices (Rapid occupational research through internet) available?

Purpose

The purpose of the initiation process is to make decision whether to process the NCS development or not based on the findings or request for NCS development.

Reference/Inputs:

- Request
- Needs identification report, Labour market survey report
- Sector map (if available)

Products

Meeting minutes stating clear decision whether to develop or not to develop the requested or initiated NCS.

Resources

- 2 days (Preparation by NCS Unit)
- ½ day Sector Skill Committee meeting
- ½ day documentation by NCS Unit
- Logistics (Stationary, refreshment)
- Honorary for expert contribution as per NSTB rules

Next

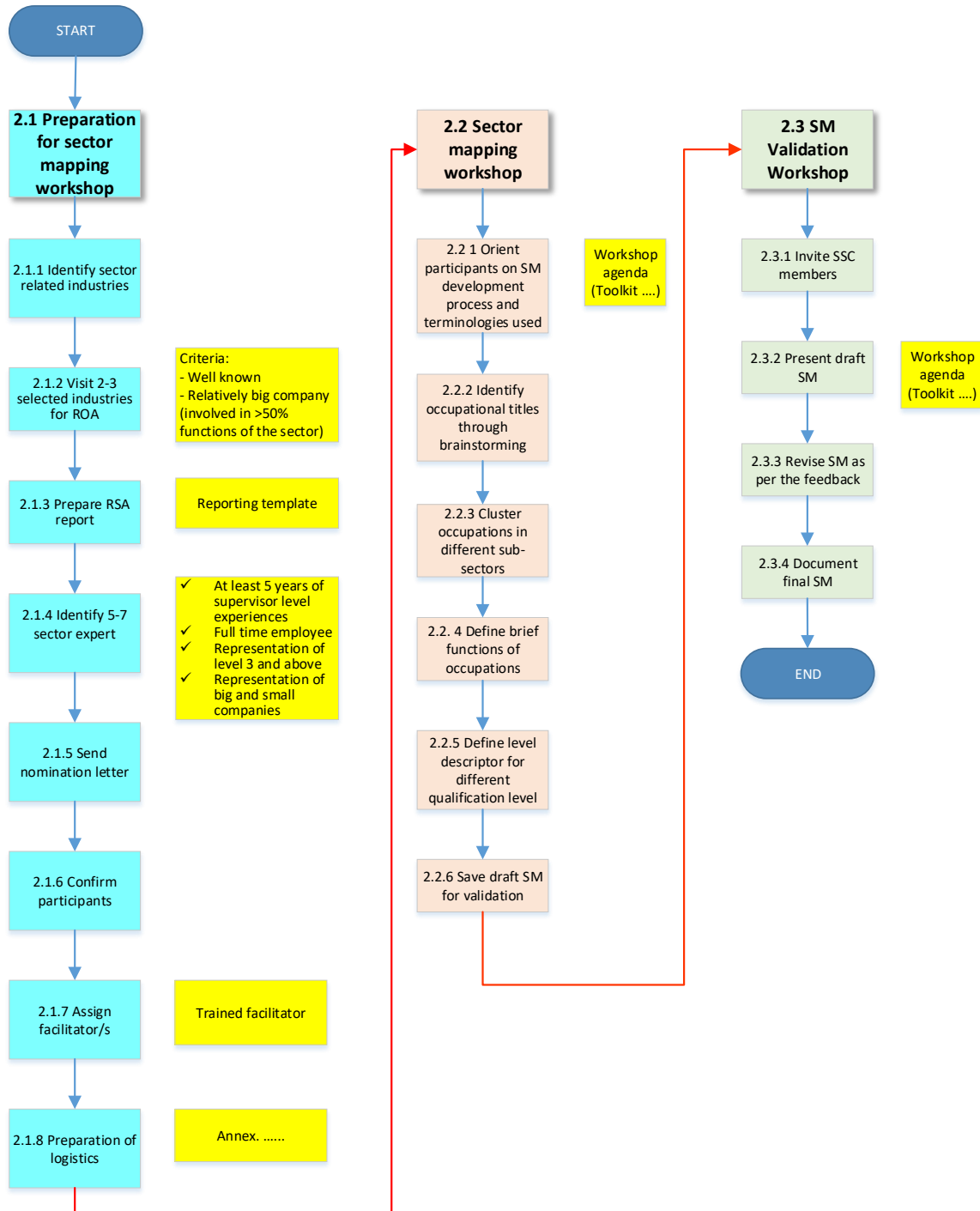
A “Yes” decision should be followed by the process sectoral mapping

2. Sectoral Mapping Process

Sectoral Mapping

Sectoral Mapping Process Chart

2. Sectoral Mapping



2. Sectoral Mapping (SM)

For developing a National Competency Standard (NCS), it is important to have a clear understanding of the whole occupational sector. A Sector Map (SM) gives information about the occupations involved in the sector and how these occupations are structured into different sub-sectors and shows in different hierarchy. It also gives brief information about the functions of individual occupation in the sector.

Purpose

- Identify different occupations involved in the sector
- Arrange occupations in different hierarchy.
- Define function of each occupation/qualification in the sector.

Process

2.1 Preparation for sector mapping workshop

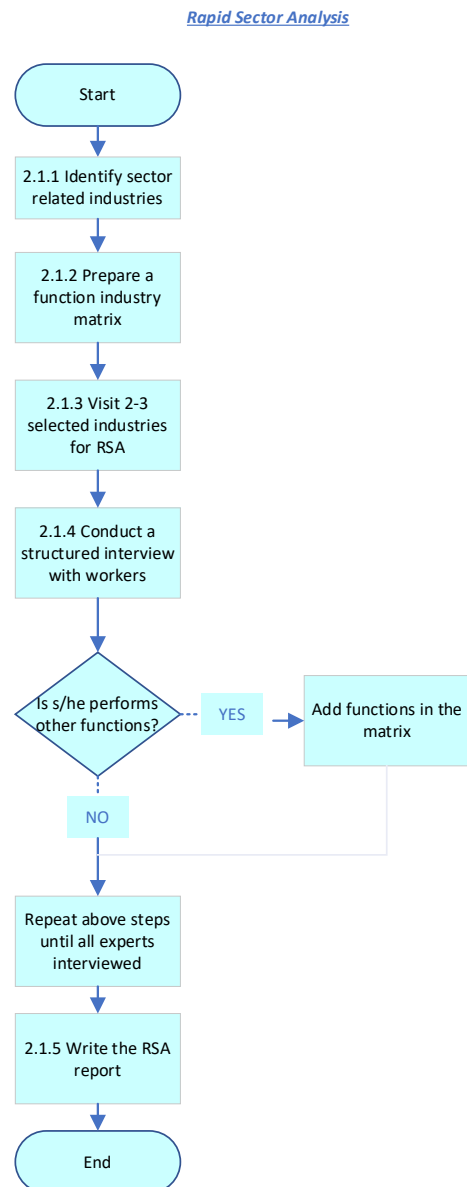
2.1.1 Identify sector related industries:

Sector map gives a clear picture of sub-sectors and occupations that makes the sector. A sector map with brief functional description of each sub-sector and occupations is essential for ensuring relevant, high quality NCS in the future.

Sector mapping focuses on world of work. The quality of sector map depends highly on the industry representation in the sector mapping workshop. Therefore, it is important that all sub-sectors within the sector must be identified and involved in the development process. For example, if the sector map for Hospitality sector is to be developed, all the sub-sector like Food and Beverage, Housekeeping, Front Desk etc. must be identified. Among the identified industries should be involved in the development process. The list of relevant industries can be obtained from the professional associations and the Sector Skill Committee (SSC).

2.1.2 Prepare a function industry matrix:

An effective Rapid Sector Analysis (RSA) requires much preparation than the Sectoral Mapping workshop itself. A potential list of functions is compiled through all the literature sources (Occupational dictionaries, Internet resources etc.) to come up a function industry matrix (tentative sub-sectors and their functions). Figure below shows an example of a matrix for the sector “Hospitality”.



2.1.3 Visit 2-3 selected industries for RSA:

From the identified industries, select 2-3 (more is better if resources available) for the Rapid Sector Analysis (RSA). RSA is a process to verify whether it represents the sector and at list 50% of the functions of the sector is doing in the industry. A function-industry matrix is used in the process. Following criteria should be followed for identifying the industries:

- Well known industry
- Relatively big
- Involved in most of the sub-sector

2.1.4 Conduct a structured interview with workers

Data is collected through a structured interview with workers working in the visited industries. Using the 'Function-Industry-Matrix' ask the expert one at a time if they perform the functions listed on the matrix. If the workers suggest additional functions, record them as well. When interview the next worker, ask the added functions as well.

2.1.5 Write the RSA report

The findings of the research are documented in a simple report containing the following information:

- The 'sector' or the occupational cluster for which the research was conducted.
- The output elements of the research (function industry matrix).
- The date of the research.
- The names of the researcher or research team.
- Names and addresses of companies and workers interviewed.
- Specific occupations and relevant workers for further processes.

Function-Industry Matrix			
Functions	Hotels		
	A	B	C
Food and beverage preparation and services			
Waitron			
Bartender			
Chef and Cooks			
Barista			
Lodging and related services			
Housekeeper			
Bell person			
Receptionist			
Amusement and recreation services			
Sightseeing (Tour guide)			
Air/Train/Bus ticketing (Travel agent)			
.....			
.....			

The second phase consists of visiting industries to verify the data from the first phase. The functions in the check list is verified with senior personnel (Manager, supervisor) of the industry. The functions which are performing in the industry is ticked (√) and not performing (X) in the respective boxes. If the verified industry is performing most of the functions in the list, they can be involved in the later development processes.

2.1.3 Prepare RSA report:

The main purpose of the RSA is to verify the relevancy of involvement of the personnel from the industry for the mapping process. Summary of the above matrix is basically the report. Based on the findings (How many functions performing in their industry) the industry is recommended or rejected for the sector mapping workshop.

2.1.4 Identify 5-7 sector experts:

5-7 sector experts are identified from the RSA report and the recommendations from SSC for inviting them for the sector mapping workshop.

2.1.5 Send nomination letter:

Selected sector experts are invited through a NSTB nomination letter (Tool SM 1). Avoid more than two experts from the same industry.

2.1.6 Conform participants:

A confirmation from (written if possible) must be obtained at least a week before the workshop date. Follow-up after sending the invitation may be required. If some of the invitees are not able or willing to participate, send invitation to other potential experts in the list.

2.1.7 Assign facilitator/s:

One facilitator and one recorder (for writing cards) should be assigned well ahead of the workshop date. The facilitator must be trained on NSTB NCS development process. If recorder is also trained on NCS development process, they can swap their role in-between. The facilitator/s should study the agenda and visuals (Tool no. SM 2 and 3) and may modify a bit as per their competency in the method. However, they should not alter the key messages.

2.1.8 Preparation of logistics:

Following logistics should be prepared to ensure the smooth process of the workshop:

Venue: Appropriate location (close vicinity) for the participants should be arranged.

A plain wall of at least 10 feet (for posting meta cards) and convenient space for participants should be considered. In case of unavailability of plain wall, two soft/pin boards should be arranged. See Tool SM 5 for the preparation check list.

2.2 Sector mapping (SM) workshop

Sectoral Map develops through two workshops.

1. SM workshop: One-day SM workshop will be conducted with 5-7 sectoral experts from leading industry of the sector guided by a trained facilitator. The NCS-Unit contacts relevant associations (if any) and leading industries/employers of the sector for identifying potential sectoral experts and their contribution for NCS development. The outcome of the workshop is the draft Sector Map.

2. SM validation workshop: A half day workshop will be conducted to fine tune and validate the draft SM developed in the first workshop by SSC. 1-2 participants can be invited from the first workshop which helps facilitators to clarify the queries from SSC members. The workshop will be facilitated by the same facilitator/s who have facilitated the first workshop. See Tool SM 2 and Tool SM 3 for orientation slides.

2.2.1 Orient participants on SM development process and terminologies used

It is one of the important steps of the workshop process. The facilitator should orient them the clear overview of the entire process. The participants should learn the terminologies and the

processes of the workshop. See tools no. SM 3 for orientation slides. Key terminologies used in the map are:

Sector: Sector is a title given to the major group of related occupation and sub-sector. E.g. Hospitality and tourism, Construction, Agriculture etc.

Sectoral map: A picture that shows all the sub-sectors (e.g. F&B, Housekeeping, Front desk, ... in the SM of Hospitality and Tourism) and occupations (Waiter, Commis, Bar Tender, ...) in their respective clusters and arranged in the different level of qualification (L1 - L8).

Functional description: It is a short description of different level of functions that persons involved are expected to perform on their job.

Following is the example of functional description of the sector “Hospital and Tourism”:

Sector (Hospitality and Tourism): Provide Accommodation, Food, Beverages and Related Services to Satisfy the Diverse Needs and Expectations of National and International Guests

Sub-sector (Food and Beverage): Provide Food and Beverages to satisfy the diverse needs and expectations of National and International Guests.

Occupation (F&B Personnel): Prepare dining room/ restaurant area for service, serve food and beverage, perform restaurant table clearance, Provide room service

2.2.2 Identify occupational titles through brainstorming

After the consensus on the function of the sector (e.g. Provide Accommodation, Food, Beverages and Related Services to Satisfy the Diverse Needs and Expectations of National and International Guests), a brainstorming is used to identify the occupations involved in the sector. The procedure of the brainstorming:

1. The facilitator reads the introductory question (written on a flip chart or on a card) and places it on pinboard. For example; Who/Which occupation are involved to ensure the well-functioning Hospitality and Tourism sector as described in the functional description? Then s/he explains the further procedure.
2. Each participant thinks about possible answers and writes them on cards. Before they start writing, it is important to orient them he criteria (Block letter, one idea per card, not more than 3 lines) of writing cards.
A possible alternative is writing down responses by the co-facilitator/recorder as they are called out by the participants.
3. The facilitator discreetly collects all cards and shuffles them. Afterwards s/he pins the cards one after the other on the pinboard and reads them aloud. This procedure is suggested when comments and opinions must be regarded independently of hierarchy and group dynamics. If statements in some cards are not clear, ask them for suggestion and re-write them.

2.2.3 Cluster occupations in different sub-sectors

After clarifying all occupation title cards, they should be cluster into different groups as the procedure described below:

1. Clusters similar cards in content (related occupations). The clustering of the cards is done by the facilitator. However, s/he will always seek the support of the participants and will not act without its general consent.
2. Give name for the cluster with the support of the participants. Basically, the cluster title will be the sub-sector. If titles are not matching the common sub sector in the job market, write the sub-sector cards and cluster the occupation accordingly.

2.2.4 Define brief functions of occupations

For better understanding of the occupation, the brief function of the occupation should be defined. First one or two examples are done in the plenary. The facilitator will write the function of the occupation with the support from the participants. Following are the examples of the function:

Waiters/Waitresses: Take orders and serve food and beverages to guests at tables in restaurant and to guest room.

Housekeeper: Perform any cleaning duties to maintain guest rooms, halls etc. in a clean and orderly manner. Duties may include making beds, replenishing linens, cleaning rooms and halls, and vacuuming.

2.2.5 Define level descriptor for different qualification level

Level descriptor is the statements that describe the qualification level of each occupation. Identified occupation of the sector which are clustered under different sub-sector further needs to rearranged according to the qualification level according to the level defined by NSTB/NVQF. The generic descriptors of National Vocational Qualification Framework (NVQF) is as follows:

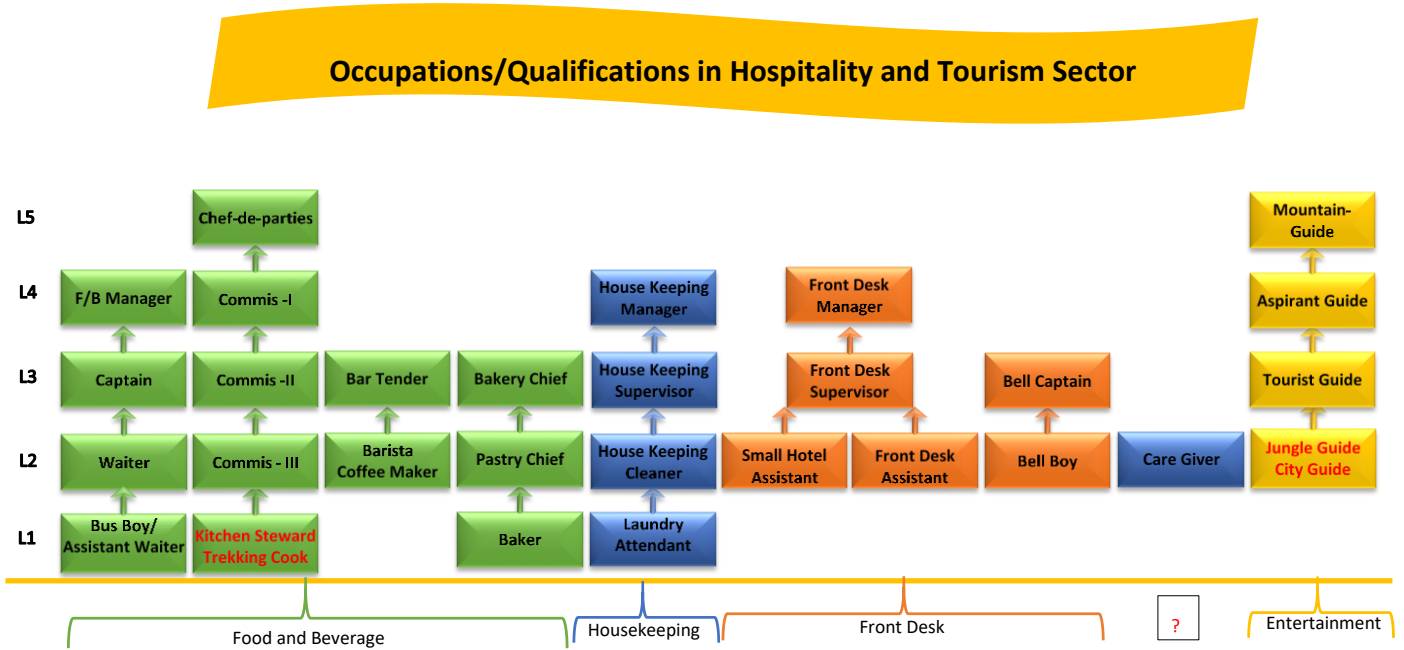
Level	Descriptors	Example Job Titles
5	Competent in comprehensive scope of work to be performed in the sector. Can handle task with autonomy and creativity. Able to build and lead team and monitor work effectively. Exhibits managerial, leadership and resources management skills as per the scope given through planned manner applying OHS and good communication.	Occupational Expert/Senior Supervisor/Manager
4	Competent in extended range of complex technical work. Can perform in some unpredictable context using given autonomy, exhibiting creativity and teambuilding. Able to interpret drawings and designs for work execution with OHS skills. Good communicator traits.	Senior Technician/Supervisor
3	Competent in broad range of given work using resources with certain autonomy and under certain supervision. Can coordinate with small team for the given task applying OHS skills.	Technician
2	Able to perform basic skill works safely in defined context under the direct supervision with limited control on resources and concepts.	Assistant Technician

1	Can perform limited scope of routine works safely in diverse intra-sectoral environment cooperating and respecting seniors.	Helper/Assistant
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2.2.6 Save draft SM for validation

Before removing the displayed cards and charts, take photographs of all the outputs of the workshop for documentation. The outcome of the workshop in the form of cards and charts should be kept safely until it is documented in computer. The same cards and charts also can be used in the validation workshop.

Sample Sector Map



2.3 Sector map Validation workshop

The draft sectoral map developed in the Sector mapping workshop is validated by the Sector Skill Committee. See Toolbox SM 4 for the agenda.

2.3.1 Invite SSC members

Good and timely communications can make any job easier. An invitation letter to SSC members for participation in the validation workshop should be sent at least a week before the workshop date. See Toolbox SM 1 for sample letter.

2.3.2 Present draft SM

If SSC members are new and participating for the first time in NCS development workshops, an orientation is good to begin with. The same orientation slides used in the sector mapping workshop can be used for the orientation.

The draft SM will be presented either in digital form or card and charts developed during the SM workshop.

2.3.3 Revise SM as per the feedback

Each statement is discussed one by one and revised if necessary, by writing new cards or directly on computer according to the feedback by the participants.

2.3.4 Document final SM

If revision is made directly on the computer, a copy of the SM should be printed out and get signature of the participants documenting the approved SM. If the cards and charts are used for revision, approval of the final SM will be made only in the next SSC meeting.

Toolbox Sectoral Mapping

Toolbox Sectoral Mapping

Sample Invitation letter

Dear Sir/Madam,

Subject: Invitation to Sectoral Mapping/Validation workshop for the sector

National Skill Testing Board (NSTB), CTEVT is on the process of developing a National Competency Standard for the sector

It is my pleasure to note that you have been selected by NSTB as a member of the panel of the sector experts for.....sector and therefore invite you to a 1-day sectoral mapping workshop to be conducted at on (10:00 am - 5:00/1:00 pm).

The methodology of sectoral mapping/validation will be focused group discussion. It involves FGD of a panel of 5-7 sector expert guided by a trained facilitator in order to identify the occupation in different hierarchy in the sector.

The product of the meeting is a sectoral map for The map will be the basis for further development of National Competency Standard (NCS) for different level of competencies of the sector.

Please note that you will be provided with an honorarium for your full-time participation according to the NSTB rules.

Yours sincerely,

.....
NCS-DU Head

Sectoral Mapping Agenda

**National Skill Testing Board (NSTB)
CTEVT
Sectoral Mapping Workshop for “.....”
Date**

Venue –

Time –

Purpose: Prepare a sectoral map of sector.

Outcome:

- Participants understood the purpose and the process of NCS development
- A sectoral map of Sector is developed.

Agenda

Time	Topic	Activity	Who
10:00	Registration	Upon arrival at meeting venue, participants signed on the registration sheet	All
10:10	Introduction and welcome	Self-introduction of participants Welcome remarks and the purpose of the workshop by the Director NSTB	Facilitator Director
10:20	Orientation	Overview of NCS development process	
10:40	Identification of occupational titles	Brainstorming: What are the occupations involved in the sector? Cluster occupations in different sub-sectors Arrange occupations in hierarchies within the sub-sector	Facilitator
11:30		Break	
11:45	Level definition	Orientation on level descriptor Define levels for each hierarchy	
12:30		Lunch	
13:30	Functions define	Orientation on function of an occupation with examples and non-examples Define function of one occupation in plenary	
14:15		Group work: Define function of sub-sector and occupation Presentation and finalization of function in plenary	
15:30		Tea break	
16:00	Way forward	Recap of the outcome and next steps of the process	Facilitator
16:20	Closing	Closing remarks by the Director NSTB	

Orientation slides for Sectoral Mapping Workshop

Slide 1

Council for Technical Education and vocational Training

National Skill Testing Board

Welcome

Occupational Sector Mapping Workshop

Date:

Slide 2

Objectives

Develop an Occupational Sectoral Map. Following outcomes are expected from the workshop:

- Participants will have common understanding of NSTB process/procedure and terms used in the National Competency Standard (NCS),
- All occupations involved in the sector are listed,
- Occupations are clustered under different sub-sector
- Functions (Short description of their role and responsibilities) of each occupation in the sector described,
- Occupations are arranged according to the its sub sector and NSTB levels

Slide 3

To achieve the objectives

- Familiarize with process and terminologies of NCS
- Discuss NVQS level descriptor

Slide 4

Workshop Ground Rules

- Everyone participates equally
- Rank and seniority are left at the door
- Share ideas freely
- One person speaks at a time
- Provide constructive suggestions rather than criticisms
- **Switch mobile phones off/silent**

Slide 5

Generic Descriptors of National Vocational Qualification Framework (NVQF)

Level	Descriptors	Example Job Title
Level 5	Competent in comprehensive scope of work to be performed in the sector. Can handle task with autonomy and creativity. Able to build and lead team and monitor work effectively. Exhibits managerial, leadership and resources management skills as per the scope given through planned manner applying OHS and good communication.	Occupational Expert/Senior Supervisor/ Manager
Level 4	Competent in extended range of complex technical work. Can perform in some unpredictable context using given autonomy, exhibiting creativity and teambuilding. Able to interpret drawings and designs for work execution with OHS skills. Good communicator traits.	Senior Technician/ Supervisor
Level 3	Competent in broad range of given work using resources with certain autonomy and under certain supervision. Can coordinate with small team for the given task applying Occupational Health & Safety (OHS) skills.	Technician
Level 2	Able to perform basic skill works safely in defined context under the direct supervision with limited control on resources and concepts.	Assistant Technician
Level 1	Can perform limited scope of routine works safely in diverse intra-sectoral environment cooperating and respecting seniors.	Helper/ Assistant

Slide 6

Aspect	NVQ Level				
	1	2	3	4	5
Scope of work / duties / tasks	Very limited	Restricted	Broad	Extended	Full
Context / working environment	possibly very large and diverse	Restricted to core working area	Wide / large including the whole work field	Extended into closely related work fields	Very broad context of the industry / sector
Complexity	Minimal	Basic	Advanced	Complex	Very high
Predictability / degree of routine	All routine or standard	Occasionally some unpredictability	Frequently not routine	Regularly unpredictable to a certain extent	Frequently unpredictable
Teamwork	Respect and cooperation	Active coordination with team members	Capable of taking on different roles in teams	Reflected and deliberate teambuilding	Strategic
Leadership	None	Rarely instructional	Instructional and often leading small working groups	Important and frequent for standing units	Full leadership for small enterprises
Autonomy	None	Rare and very limited	Regular to a certain degree	Often to a large degree	Full at all times
Control of Resources	None	Limited	Some	Ample	Full
Creation of concepts	Not required	Optional	Likely	Required	Frequent

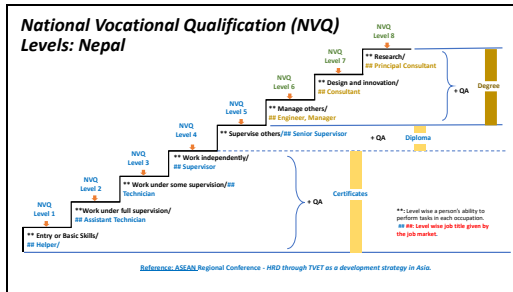
Slide 9

Occupational Sector

The title given to the group of occupation/career that requires for effective functions of the sector.

Occupation sector consist of sub-sectors and occupations.

Slide 7



Slide 10

Competency

The knowledge, skills and attitudes required to complete a work activity to the standard expected in the workplace.

Four Dimensions of Competency:

- **Task skills:** specific skills needed to do the task as described in the unit of competency
- **Task management skills:** Effective management of a number of interrelated tasks, all of which make up the job outcome being assessed.
- **Contingency skills:** The ability to cope with irregularities or breakdowns in routine
- **Job/Environment management skills:** Dealing effectively with the expectations of their work environment, working well with others and under instruction as required.

Slide 8

Occupation

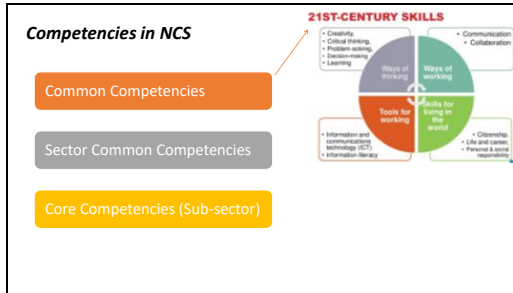
The title that describes a group of workers that perform similar Duties and Tasks.

Slide 11

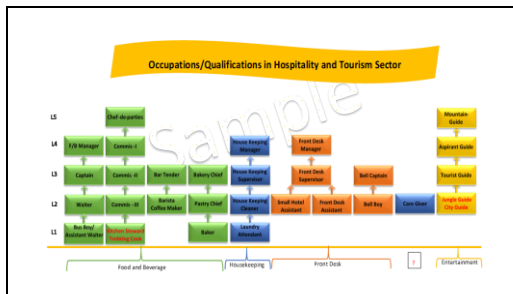
Example

Task skills	Copy document using photocopier
Task management skills	Select right paper and functions
Contingency skills	Clear paper jams
Job/environment management skills	Cooperate with team members on print job requirements

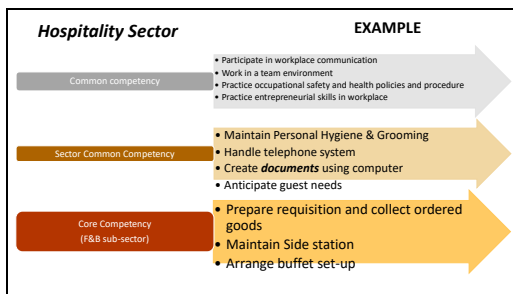
Slide 12



Slide 13



Slide 14



Sectoral Mapping Validation Agenda

National Skill Testing Board (NSTB)

CTEVT

Sectoral Map Validation Workshop for “.....”

Date

Venue:

Time –..... –

Purpose: Validate the draft SM for

Objectives:

- SSC members understood the purpose SM and the terms used in the SM
- Draft SM review and made necessary changes by SSC members
- SM approved by the SSC.

Agenda

Time	Topic	Activity	Who
10:00	Registration	Registration of the participants	All
10:30	welcome	Welcome remarks and the purpose of the workshop by the Director NSTB Welcome remarks by SSC coordinator	Facilitator
10:50	Objectives and schedule	Schedule of the workshop	Facilitator
10:55	Orientation	<ul style="list-style-type: none">• Give orientation on NCS development process• Give orientation on terms used in the SM	Facilitator
11:15		Tea/Coffee Break	
11:30	Review	Presentation of the draft workshop: <ul style="list-style-type: none">• Presentation of the draft SM• Revise statements that need to be changed through moderated discussion	Facilitator, Participants
12:50	Closing	Way forward The SM is the foundation for further NCS development activities. Next process will be to develop competency profile/Functional map for the occupation “.....” <ul style="list-style-type: none">• Closing remarks by the Director NSTB	Facilitator
13:00		Lunch	

Workshop Preparation checklist

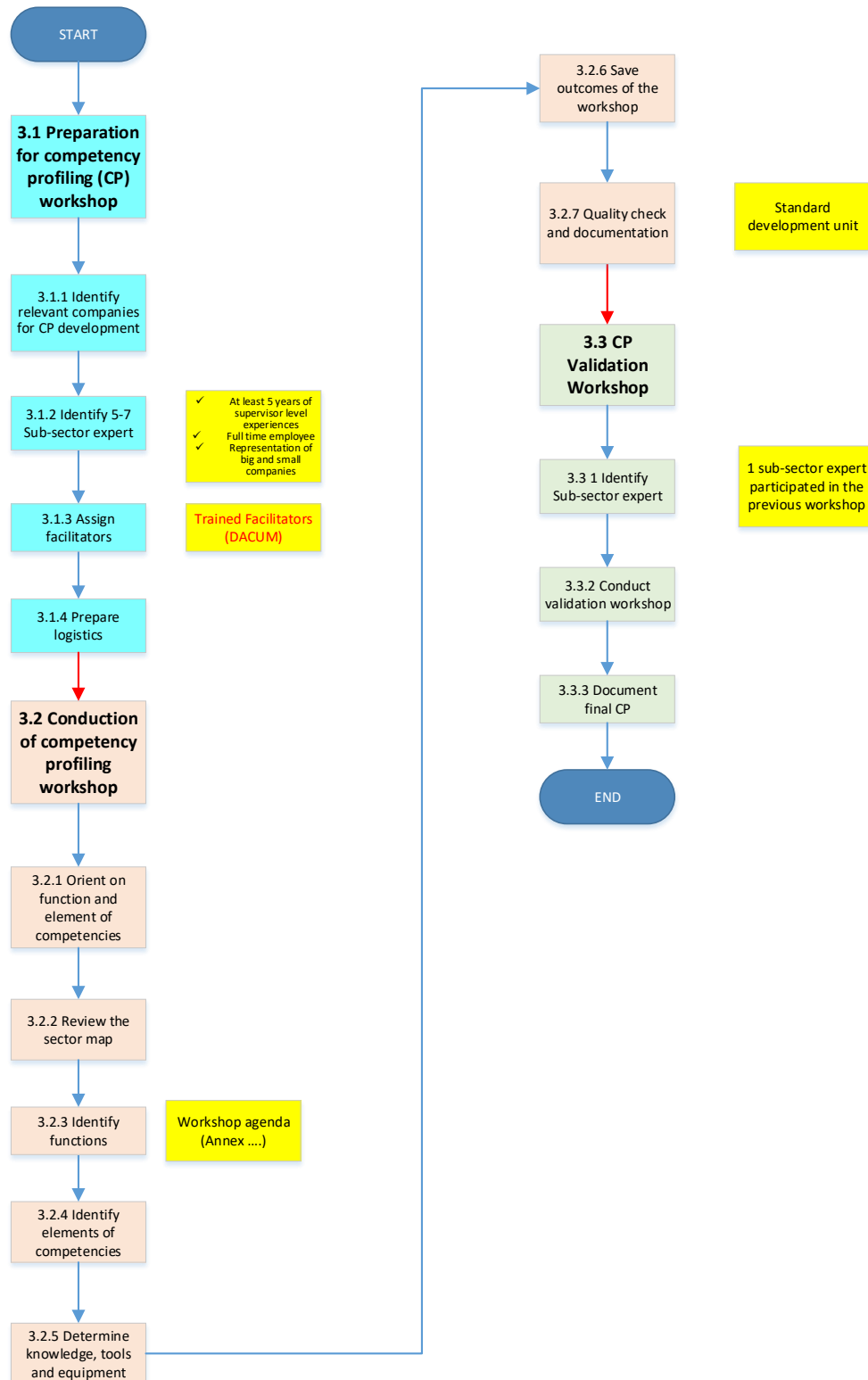
No.	Activity	Tick box
A)	Pre- workshop preparation	
1)	Invitation and release letters	
	Participants	
	Confirmations and follow-ups	
2)	Bookings	
	Venue (room, meals)	
	Equipment	
3)	Assign facilitators	
B)	Venue Preparations	
1)	Sitting arrangements	
2)	Workshop equipments (laptop, beamer/ OHP, printer, pin boards, flip chart stands)	
3)	Workshop materials	
	Handouts, sample CPs	
	Presentation slides	
	Stationaries	
	Registration/Attendance sheet	
4)	Support services (documentation Assistant)	

3. Competency profiling process

Competency Profiling

Competency Profiling Process Chart

3. Competency Profiling



3. Competency Profiling

Development of Competency Profile begins with identifying the broad areas of competencies of a sub-sector. These areas of competencies are expressed as key functions in the map. Depending upon the size and nature of competencies, these key functions may further breakdown into functions. Each function describes a broad area of performance within a sub sector. A function may still be too large for practicably demonstrable or assessable for the purposes of recognition of competence of individuals which is the major roles of Competency Standards. Functions are thus further subdivided into elements of competency. The element of competency constitutes the building blocks of each function of a sub-sector. They describe in more detail what competencies are involved in a function. Functional competencies required for different level of certification is addressed within this overall framework of the sub-sector.

Elements of competency represent specific components of the performance. They should be written such that they are expressed in terms of performance in the world of work;

- can be commonly understood by the industries;
- are recognisable and demonstrable in the workplace;
- represent the small component of the unit with a meaningful outcome.
- result in a product, service or decision.
- have a definite beginning and ending point.
- can be performed independent of other elements of competencies.
- consist of two or more steps.

Purpose

- Determine functions of competencies required for the qualification of different levels.
- Identify elements competencies of each function
- Identify related knowledge, tools/equipment required to perform the competencies.

Product

Competency profile is an information about a sector presented in table format. Competency standard basically derived from this information. See example competency profile in the tool T-3

Qualification-Unit-Occupation Level clustering Include descriptors of level

Level	Description F & B	Occupation title
1	Perform limited scope of routine works of minimal complexity in diverse intra-sectoral environment cooperating and respecting seniors. Work safely Follow supportive work according to the instruction Maintain personal hygiene Groom for workplace Have knowledged of dos and dont's in Kitchen, Resturant and its periferi Identify tools and equipments uses in hotel Safety storage of tools and equipment	Helper
2	A B D E H K	Waiter/Hostess
3	(A B D E H K) C F I	Captain
4	3 + G	Supervisor/assista manager
5	4 + J	Restaurant/ Outlet Manager

Letter A-K are the units of competencies. Above table shows the sets of units required for different level of certification.

Process

Competency Profile is developed sector-wise. Two days' workshop with Technical Committee (TC) and 5-7 expert practitioner guided by trained facilitators develops Competency Profile (CP) and Qualification Unit description of sub-sectors. See Toolbox T-3.2 and T-3.3 for the agenda and the orientation slides

3. Prioritize sub-sector for NCS development by SSC

There are more sub-sectors in a sector. Competency profiling is developed for each sub-sector separately. Depending on the request for developing the standard or need of the labor market, sector committee will select or prioritize sub-sectors for developing competency profiles.

3.1 Preparation for competency profiling (CP) workshop

3.1.1 Identify relevant industries for CP development

Competent expert practitioner is a must for developing quality competency profile. Rapid Sector Assessment (RSA) report guides us to select good expert practitioner. The report also gives idea about the key functions of that sector. The matrix below is an example of RSA findings and it shows clear that Company-A is performing few functions only and should not invite for the workshop. Company-B/C are performing most of the functions and recommended for the workshop.

Function-Industry Matrix			
Functions	Hotels		
	Company-A	Company-B	Company-C
Food and beverage preparation and services	√	√	√
Waitron	√	√	√
Bartender		√	√
Chef and Cooks	√	√	
Barista		√	√
Lodging and related services	√	√	√
Housekeeper	√	√	√
Bell person		√	√
Receptionist	√	√	√
Amusement and recreation services		√	√
Sightseeing (Tour guide)		√	√
Air/Train/Bus ticketing (Travel agent)		√	
	Not recommended	Recommended	Recommended

3.1.2 Identify 5-7 sub-sector experts

Selected sector experts are invited through a NSTB nomination letter (Please see Toolbox T-3.4 for sample letter). The experts should be selected from the RSA recommended companies. More than two experts from the same industry should not be invited to avoid the domination.

3.1.3 Assign facilitators

One facilitator and one recorder (for writing cards) should be assigned well ahead of the workshop date. The facilitator must be trained on competency development process facilitation (DACUM

Facilitator Training of TITI or similar training is recommended). If recorder is also trained on NCS development process, they can swap their role in-between. The facilitator/s should study the agenda and visuals (available in the toolbox) and may modify a bit as per their convenience in the methods. Facilitators should also study about the sector or possible occupations within the sector for understanding terms and terminologies used and to get some idea about the sub-sector. Information can be found on occupational dictionaries like ISCO-88, NSCO, ASCO, and ONET etc.

3.1.4 Prepare logistics

Venue: Appropriate location (close vicinity) for the participants should be arranged. A plain wall of at least 10 feet (for posting Meta cards) and convenient space for participants should be considered. In case of unavailability of plain wall, three soft/pin boards should be arranged. See Toolbox T-3.5 for the preparation check list.

3.2 Conduction of Competency Profiling workshop

3.2.1 Orient on function and elements of competencies

Although the participants are experts in their field, the information we seek may not be easy for them to explain exactly that we are looking for. Therefore, orientation is important and should allocate enough time to ensure experts understood the terminologies and the processes of the workshop well. See toolbox T-3.3 for orientation slides. Key terminologies used in the profile are:

Competency: There are varying definition of competence. Some of the definition are:

"Human competence is the ability to perform. Knowledge, attitude and effort are of little value without results."

(William Blank)

"Occupational competency...is defined as the ability to perform tasks common to an occupation within an acceptable range

(David Fretwell, The World Bank)

"In England, competence reflects the expectations of employment, and focuses on work roles rather than jobs. In the USA, competence is an underlying characteristic of a person which results in effective and/or superior performance in a job. Thus, the term competence-based training is being used in England, as opposed to competency-based training in other countries."

(Matthias Jäger / Tobias Bühler, Swisscontact, Switzerland)

competence - based = in technical education and vocational training means that programs

- have content directly related to work/employment
- focus is on "doing something well" and
- evaluation is based upon industry work standards"

(Late John Collum, TITI)

Four dimensions of competency:

Technical skills alone are probably not enough to assess whether the performer is competent or not. Performers are competent when they can apply their knowledge and skills to complete work activities in a range of situations and environments successfully. The four dimensions of competency should be considered to address the range of situations and environments, The four dimensions are:

Task skills: This involves undertaking a specific workplace task[s]. This involves the capacity to perform required tasks. This also deals with the requirement of performing job specific tasks in accordance with agreed methods and procedures.

Task Management Skills: This involves managing a number of different tasks to complete a whole work activity. This means working efficiently to meet deadlines, handle a sequence of interrelated tasks, and progress smoothly between tasks to achieve a complete outcome.

Contingency Management Skills: This involves responding to problems and irregularities when undertaking a work activity, such as:

- Breakdowns
- Changes in routine
- Unexpected or atypical results or outcomes
- Difficult or dissatisfied clients.

Job/Role Environment Skills: This involves dealing with the responsibilities and expectations of the work environment when undertaking a work activity. This represent the requirement to deal with responsibilities and expectations of work environment, such as:

- Working with others in a diverse environment
- Interacting with clients and suppliers
- Complying with standard operating procedures
- Observing enterprise policy and procedures.

These dimensions may be found in the different parts of a unit of competency, that is, in the elements, the performance criteria, the range of variables statement or evidence guide. Not every unit of competency will necessarily contain all four dimensions, however, in a group of units they should be covered effectively. Dimensions of competency must be considered when an assessor is gathering evidence of a candidate's competency for a unit, and assessment should be designed to address these accordingly.

Functions:

Functions are broad areas of competencies that demands certain knowledge, skills and attitude for performing it successfully. These broad areas of competencies are expressed as key functions in the map. Functions are unique and different than other functions. Size of function may be different. Depending upon the size and nature of competencies, these key functions may further breakdown into functions.

Function statements are written starting with an action verb (maintain, assist, prepare, analyse,) with an object (menu, plan, guest,) and a qualifier (business plan, side plate, engine oil) that requires to make the statement specific.

Examples:

- Maintain restaurant menu
- Prepare business plan
- Assist guest for selectin menu
- Change engine oil

Unit of competencies:

Key functions and function independently or in combination of two or more functions are taken as unit of competency while developing competency standard.

Element of competency:

Any of the basic building blocks of a unit of competency which describe the key activities that is observable in the workplace and must be performed to demonstrate competence in the competencies covered by the unit. Elements of competency represent discrete specific components of the unit of competencies. They should be written such that they:

- are expressed in terms of performance in the world of work.
- can be commonly understood by the industries.
- are recognisable and demonstrable in the workplace.
- represent the small component of the unit with a meaningful outcome.
- result in a product, service, or decision.
- have a definite beginning and ending point.
- can be performed independent of other elements of competencies.
- consist of two or more steps.

Examples:

- Apply first aid measures on cut
- Check windows & curtains
- Check reservation
- Serve beer
- Arrange cutleries as per order

3.2.2 Review the sector map

The Sector Map will be presented either in digital form or distributed printed copy to the participants. Give some time (~10') to the participants to go through it have overview of the sector. The sector map was developed and verified through two different workshops with the sector experts. Therefore, at this point of time, it is not recommended to revise the sector m

3.2.3 Identify functions

The functions are identified through discussions in the plenary. The leading question for the discussion would be “Which functions are required for operating the sub-sector? successfully?” The functions should be discussed one at a time. As soon as one idea about the function is shared by the participant, it should be written on a meta card and verify whether it meets the criteria:

- Is specific,
- Written with an action verb and an object,
- Terminology used in the industry,
- The function is common to most industries.

3.2.4 Identify elements of competencies

Elements of competency represent specific components of the performance. They are basic building blocks of a function which describe the key activities that is observable in the workplace and must be performed to demonstrate competence. They should be written as such that they:

- are expressed in terms of performance in the world of work,
- can be commonly understood by the industries,
- are recognisable and demonstrable in the workplace,
- represent the small component of the function with a meaningful outcome,
- result in a product, service, or decision,
- have a definite beginning and ending point,
- can be performed independent of other elements of competencies,
- consist of two or more steps.

Once the functions have been identified the facilitator takes one function at a time and keeps asking the committee ‘what do you do’ to fulfill the function. The discussion then leads to identifying very specific element of competencies that the expert workers perform. The facilitator must make sure that all experts equally participate in the discussions. Only statements that meet the definitions and are performed currently by most of the participants are recorded and post on the wall/soft board.

Once all the elements of competencies are identified, they are re-arranged in certain sequence. There is no best way to sequence identified statements. Sequencing could be the order tasks are performed in, the frequency of performance, or the complexity of performance. The sequence, however, is not critical and does not have to be exact. After all functions and elements of competencies are identified and arranged, a photograph should be taken to ensure the proper documentation.

3.2.5 Determine knowledge, tools and equipment

Another important outcome of the process is the identification of essential knowledge, tools and equipment that expert workers need to know to be able to perform their tasks.

When all the duties and tasks are identified, the facilitator should go over each statement carefully—checking for the best verb and asking for more tasks. It is also the right time to settle any unresolved statements.

3.2.6 Save outcomes of the workshop

Before removing the displayed outcomes (cards and charts), take photographs of all the outcomes of the workshop for documentation. The outcome of the workshop in the form of cards and charts should be kept safely until it is documented in computer. The same cards and charts also can be used in the validation workshop.

3.2.7 Quality check and documentation

Basically, the Standard Development Unit of NSTB documents the competency profile in the standard format. The same format as competency profile example T-3.1 should be used.

There may be spelling mistakes or unclear statements recorded during the workshop. During the documentation, statements should be checked using the criteria and not clear statements should be note down for revision later during the validation workshop.

3.3 Competency Profile validation workshop

In order to make the competency profile more appropriate and relevant for the context, the information should be verified by the experts who were not involved in the developing draft profile.

3.3.1 Identify sub-sector experts

Identify 3-5 sub-sector experts other than the ones who participated in the previous workshop. Experts can be identified from the RSA report or can be recommended by the sector committee. One participant from the previous workshop should be invited for clarifying any queries from other participants during the validation workshop.

3.3.2 Conduct validation workshop

A one-day workshop will be conducted to fine tune and validate the draft competency profile developed in the first workshop. The workshop will be facilitated by the same facilitator/s who have facilitated the first workshop. The procedure is the same as in the first workshop. The difference only is to verify the statements one by one using the same criteria instead of asking new competencies.

3.3.3 Document final Competency Profile

If revision is made directly on the computer, a copy of the CP should be printed out and get signature of the participants for documenting the approved CP. If the cards and charts are used for revision, approval of the final CP will be made later.

Toolbox

Competency

Profiling

T-3.1 Example CP

Area	Food & Beverage Service Personnel														
S.N	Main Area	Sub Areas													
1	A	Sub Areas													
	Maintain Personal Grooming & Hygiene	A ₁	A ₂	A ₃	A ₄	A ₅									
		Maintain personal grooming	Wear Uniform	Maintain personal hygiene	Follow workplace safety procedure	Apply first aid measures on cut & burn									
2	B	Sub Areas													
	Prepare work area for guest service	B ₁	B ₂	B ₃	B ₄	B ₅	B ₆	B ₇	B ₈	B ₉	B ₁₀	B ₁₁	B ₁₂	B ₁₃	B ₁₄
		Clear workarea	Maintain lighting	Maintain ventilation	Check windows & curtains	Check furnitures	check audio system	Maintain room temperature	Wipe equipment F&B	Exchange Linen	Prepare requisition	Maintain sidestation	Fold Napkin	Collect supplies	layout center piece
3	C	Sub Areas													
	Welcome Guest & take order	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C ₉					
		Check reservation	Greet Guest	Assist guest to	Escort guest	Handover guest	Serve waiter	Perform service	Prepare Menu	Prepare KOT/BOT					
4	D	Sub Areas													
	Serve F&B Order	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇							
		Collect beverage	Serve beverage	Arrange cutlery	Collect food	Serve food	Take message	Take order							
5	E	Sub Areas													
	Perform Clearance	E ₁	E ₂	E ₃	E ₄										
		Clear crockeries	Clear cutleries	Clear glasswares	Perform crumbing										
6	F	Sub Areas													
	Process bill and bid farewell	F ₁	F ₂	F ₃	F ₄	F ₅									
		Prepare bill	Present bill	Collect payment	Settle bill	Bid farewell									
7	G	Sub Areas													
	Prepare log book & report	G ₁	G ₂	G ₃	G ₄	G ₅	G ₆	G ₇	G ₈	G ₉	G ₁₀	G ₁₁	G ₁₂		
		Full logbook	Compliment card	Prepare sales Summary	compile bills	Record incident report	Update inventory	Update soilage report	Update breakage report	Prepare duty roster	Maintain customer history	Safety hazards	Prepare maintenance job order		
8	H	Sub Areas													
	Perform outlet closing	H ₁	H ₂	H ₃	H ₄	H ₅									
		Attend debriefing	Restore & Equipment F&B	Collect soiled linen	Dispose garbage	Deposit payment									
9	I	Sub Areas													
	Receive feedback & handle guest concerns	I ₁	I ₂	I ₃	I ₄										
		Provide comment card	Receive comment card	Handle guest complaints	Perform admin function										
10	J	Sub Areas													
	Perform admin function	J ₁	J ₂	J ₃	J ₄	J ₅	J ₆	J ₇	J ₈	J ₉	J ₁₀				
		Coordinate inter department	Appraise subordinate	Implement cost control measures	Conduct market survey	Conduct training	Plan menu	Perform menu engineering	Plan food promotion event	Monitor service delivery standard	Monitor food & beverage quality				
11	K	Sub Areas													
	Provide room service	K ₁	K ₂	K ₃	K ₄	K ₅	K ₆	K ₇	K ₈						
		Take and process room service order	Setup tray and trolley	Process room service bill	Present and serve F&B in guest room	Clear away room service equipment	Bush boy waiter /head waiter/captain/senior	Hostess/ supervisor Asst. Manager	Clear crockeries, cutleries, glassware as per the						

<p>Related Knowledge</p> <ul style="list-style-type: none"> • Potential hazards in hospitality sector • Safety measures • Hazards and safety signage • Hospitable hygiene & grooming • Product knowledge of organization • Active listening Way of Greetings in different culture • Cleaning procedure of side station • Different types of cleaning agent/materials 	<p>Tools/Equipment</p> <ul style="list-style-type: none"> • Tray (bussing & round) • Waiter cloth • Waiter kit (bottle opener, pad, pen, matchbox) • Regular cutleries, crockeries and glassware • Restaurant table, chairs and linen • Side station • Center piece (Bud vase, cruet set)
<p>Related Skills</p> <ul style="list-style-type: none"> • Operate fire extinguisher • Apply blankets to control fire • Interpret evacuation plan • Computer operation • Dusting • Moping • Brooming • Vacuum cleaning • Air freshening 	<p>Occupational health and safety</p> <ul style="list-style-type: none"> • All items collected and served should be handled with care. • Avoid bare hand and consider safety precaution while handling food & beverage. • Clean immediately in case of spillage during collecting & serving of food & beverage • Use of waiter cloth or napkin

T-3.2: Competency Profiling workshop Agenda

NSTB Competency Profiling/Functional Mapping Workshop for “.....”

Date

Venue –

Time –

Purpose: Prepare a competency profile/functional map of Sub-sector.

Outcome:

- Functions and elements of competencies required for successful functioning of the sub-sector identified
- Unit/s required for different level of qualification described.

Time	Topic	Activity	Who
	Opening	Opening remarks by NSTB Director/TC-coordinator/NCS Development head <ul style="list-style-type: none"> • Welcome • Purpose of the workshop 	
	Slide	As Committee enters... Welcome slide	
		Facilitate self-introduction activity Name Organization Experience in the field	
	Slide	Objectives of the workshop Administrative details (schedule) The activity will be finished by A/P.M. Workshop ground rule	F
	Cards (Newly written if possible)	Quick presentation of the sector map <ul style="list-style-type: none"> • Let participants read the Sector map (cards) for ~10' • Dose this reflects all the personnel involved in the(sub-sector)? • Let participant share their view (Collect critical feedback if any for further discussion in the SSC) 	
	Slide	Identify Function Input Competency: The ability to do something successfully or efficiently. Functions: <ul style="list-style-type: none"> • Major segment of a sub-sector • Unique function within the sub-sector 	

		<ul style="list-style-type: none"> • Written with an action verb • No one to one relationship • Size may vary <p>Examples:</p> <ul style="list-style-type: none"> • Perform cutting • Prepare Breakfast • Prepare vegetable dishes • Prepare salad and dressing • Prepare sauces • Clean and maintain Work Area • ??? <p>Identify functions based on the SM:</p> <ul style="list-style-type: none"> • Which functions are required for operating the sub-sector? successfully? • List functions on meta cards • Verify with the criteria: specific, action verb, performing in the sector • Sequence the elements 	
	Slide	<p>Develop Unit Descriptor</p> <p>Input</p> <p>Definition: statements that describe the unit for better clarification</p> <p>Example:</p> <p>Unit: Perform cutting</p> <p>Descriptor</p> <p>This unit deals with the knowledge, skills, and attitudes in cutting of foodstuffs required for cooking. S/he will be able to cut vegetables, debone/fillets and cut meat/fish as per the instruction.</p> <p>Development:</p> <p>Follow group work assignment slide 10</p>	
	Slide	<p>Cluster elements of competency</p> <p>Element:</p> <ul style="list-style-type: none"> • Basic building block of unit • Describes key activities to demonstrate competence <p>Identify tasks that falls under one unit as an example in plenary</p> <p>Let participants cluster the task under identified units</p>	
		NVQ Level assigning and level descriptor writing	
		<p>Closing</p> <p>Thanks, all panel members for the valuable contribution</p>	

Selecting and training the right candidates as facilitators for CP/FM development is very crucial for getting quality CPs/FMs. Following criteria for selecting facilitators are suggested:

- At least a University degree or equivalent
- Trained on Job-Task Analysis/..... (DACUM facilitator, Task Analysis Training)
- Good communicator, especially in English language
- Ability to work in team
- General facilitator knowledge/ abilities and experience in conducting workshops.
- Computer literacy in MS Office applications (MS word, XL, PPT)
- Have experience in using workshop equipment and methods such as Meta-plan etc.
- Available on-call basis engagements/ assignments in case of other than NSTB own staff.

T-3.3: Orientation slides for Competency Profiling Workshop

Slide 1

Council for Technical Education and vocational Training

National Skill Testing Board

Welcome
Competency Profiling/Functional Mapping Workshop

Date:
Venue:

Slide 2

Unit of competency

Unit of Competency A major segment of the overall Competency of a profession, typically representing a major function or role of the profession.

The unit title is expressed as a major function in the job e.g.
Maintain.....
Carry out.....
Perform.....

Slide 3

Objectives

Develop a Competency Profile (CP)/Functional Map (FM) of the sub-sector Following outcomes are expected from the workshop:

- Participants will have common understanding of terms used in the Competency Profile (CP)/Functional Map (FM),
- All competencies (functions and elements) are listed,
- Elements of competencies are clusters under different functions

Slide 4

Workshop Ground Rules

- Everyone participates equally
- Rank and seniority are left at the door
- Share ideas freely
- One person speaks at a time
- Provide constructive suggestions rather than criticisms
- Consider all statements carefully
- Observers cannot participate in the discussion
- Switch mobile phones off or keep in silence

Slide 5

What is Competence?

"the ability to perform the activities within an occupation or function to the standard expected in employment".

In Nepal, the **Competency Profiles/ Functional Map** developed for the National Competency Standard (NCS) are such standards which describe in a nutshell WHAT and in WHICH QUALITY A PERSON SHOULD BE ABLE TO DO in the world of work.

Slide 6

What is NCS?

'Competency standards' usually refer to the occupational functions which a person must be able to perform in an employment.

'Competency standards' are made up of a number of units of competency each of which describes functions or role in a particular job or occupation

In Nepal, the **Competency Profiles/ Functional Map** developed for the National Competency Standard (NCS) are such standards which describe in a nutshell WHAT and in WHICH QUALITY A PERSON SHOULD BE ABLE TO DO in the world of work.

Slide 9

Function

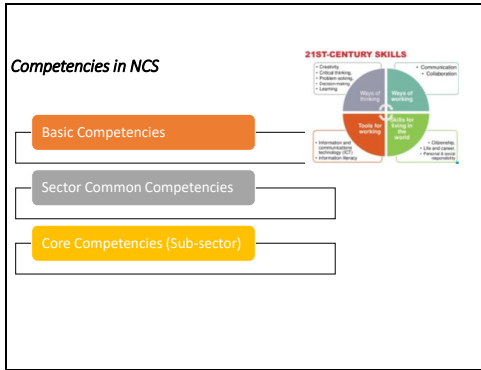
The functional statement is unique and different from other functional statements.

There is no one-to-one relationship between functional statements and the subsector.

Sometimes one function is enough for one occupation;
Sometimes two or more functions are required in an occupation;

Size of function may vary. Bigger functions can be divided in to key function and functions.

Slide 7



Slide 10

Brainstorming

Task What are the functions, apersonnel is performing in Nepal?

- Step**
1. Let each participants write 3 functions on meta cards
 2. Display cards on a pin board
 3. Read and clarify if needed
 4. Merge/Cluster similar cards
 5. Give name of the cluster
 6. Is there any missing function in the sector?
 7. Add if any
- Time** 10 min. for initial card writing

Slide 8

Function

A major segment of the overall Competency within a sub-sector (e.g. F&B, Housekeeping, Front desk), typically representing a major function or role of the profession.

The functional statement is expressed as in the job e.g.

- Maintain.....
- Carry out.....
- Perform.....

Slide 11

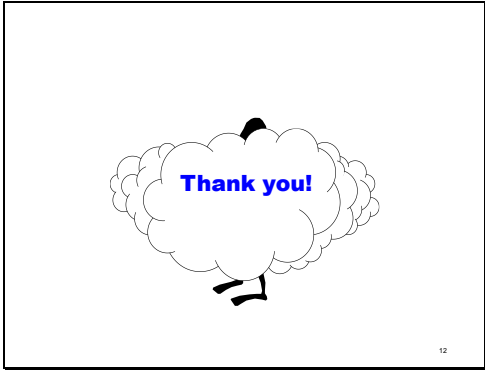
Elements of competencies

Any of the basic building blocks of a function which describe the key activities that is observable in the workplace and must be performed to demonstrate competence.

Example:

- Apply first aid measures on cut & burn
- Check windows & curtains
- Check reservation
- Serve beverage
- Arrange cutleries as per order

Slide
12



T-3.4: Sample request letter for nomination and release of experts to CP Workshop

Letterhead NSTB

Dear Sir/Madam,

RE: Request for assistance in the nomination and release of expert (Manager/Supervisor) of the sub-sector for scheduled Competency Profiling/Functional Mapping Workshop.

National Skill Testing Board is developing National Competency Standards as a part of reforming Technical Education and Vocational Training in Nepal. One of the major reforms is to establish a Nepal Vocational Qualification Framework (NVQF). The NVQF effectively link Education/Training to the real world of work with competencies and qualifications.

One of the important process in developing NCS is the Competency Profiling. The process involved Technical Committee members and 3-5 supervisor and above employee from the sub-sector under analysis. The key methodology applied is brainstorming facilitated by a trained facilitator in order to identify functions and elements of competencies required for a successful employee in the sub-sector. Related knowledge, skills and tools/equipment required in the sub-sector are also identified.

The product is a Competency profile/Functional Map chart. Since it will define what happens in work life (on the job) it is an invaluable reference for the development of the standard, qualifications, training programmes, curricula and test instruments which are directly relevant to employment requirements.

The purpose of this letter is to request you to nominate and allow your competent manager/supervisor to participate in the scheduled CP/FM development workshop scheduled for as per the programme outlined below:

Title of Sub-sector	Workshop Date	Time
		10.00a.m - 5:00 p.m.

We kindly request you to send nomination together with their telephone contacts (if applicable) before end of

Participants will be provided with an honorarium for their participation according to the NSTB rules.

Should you require further clarification, do not hesitate to contact Mr/s..... Standard Development unit telephone (.....), Email (.....).

Thanking you in advance.
Yours sincerely,

T-3.5: Equipment and supplies required for CP workshop

Multimedia and screen

1 roll (25 sheets) flipchart paper

5 inches x 8 inches white rectangular cards for task statements (same quality as Meta-plan cards) (total number 180)

2 packets Blu-tack for posting cards

Chisel-tip markers 10 black markers and 2 new red markers; pins for pin boards; flash cards; masking tape; scissors; glue for pasting cards

an uninterrupted wall of ~ 4 meters wide and 3 meters high for posting cards.

Workshop Preparation checklist

No.	Activity	Tick box
A)	Pre- workshop preparation	
1)	Invitation and release letters	
	Participants	
	Confirmations and follow-ups	
2)	Bookings	
	Venue (room, meals)	
	Equipment	
3)	Appointment of facilitators	
B)	Venue Preparations	
1)	Sitting arrangements	
2)	Workshop equipment (laptop, beamer/ OHP, printer, pin boards, flip chart stands)	
3)	Workshop materials	
	Handouts, sample CPs	
	Presentation slides	
	Stationaries	
	Registration/Attendance sheet	
4)	Support services (documentation Assistant)	

4. Standard Development Process

Standard Development

Standard Development Process Chart

4. Performance Standard Development



4. Performance Standard Development

In a competency profile, units and elements of competencies are described. It doesn't describe how well those competencies must be performed for effective functioning of a unit/sub-sector. Performance standard/criteria for each of the elements of competencies thus should be developed to describe the level of performance that industry expects of that performer. Performance standards/criteria are developed in an expert workshop with TC members guided by trained facilitator.

Competencies in NCS is categorized in to Basic, Sector common and Core competencies. Basic competencies are common to all occupation and developed separately. Sector common competencies are common to all sub-sector within the sector and developed by Sector Committee (SC). Core competencies applicable for a sub sector only detailed in this process. Both basic and sector common competencies are not covered.

Purpose

The purpose is to describe the performance standard/criteria against which the performer is evaluated before certifying whether he/she is competent or not. The competency standard may include cognitive performance, a psychomotor performance, or an attitudinal performance, if the performance affects the function in the sub-sector.

Process

Performance standards of a sub sector is developed by the Technical Committee (TC) members in a workshop setting guided by trained facilitators (two recommended). Following is the recommended process for the performance standard development (See flow chart above for the process overview):

4.1 Preparation for the workshop

Preparation of the workshop is an important factor for achieving the expected outcomes. Preparation should consider familiarizing the sub sector under development, venue, conformation of the participants and presentation/distribution material etc. The required preparation is described below.

4.1.1 Schedule workshop date, time and venue

This step should take place approximately 2-3 weeks before the workshop. The date and the workshop schedule should be fixed in consultation with the sector committee coordinator. The availability and readiness of the venue for the specified date should be reconfirmed a few days before the workshop.

4.1.2 Confirm participants

Participants (TC members) should be formally invited to the workshop. Invitation should be sent at least two weeks before the workshop date. As TC members are expert professional and busy in their regular work. Participation to the workshop should be reconfirmed 2-3 days before the workshop to take necessary action if there are members who previously replied that they would participate but were not able to do so for various reasons.

4.1.3 Prepare resources and logistics

Preparation of the materials, checking of proper functioning of devices (Multimedia projector, screen, laptop, adopters), actions to fill the missing participant(s) before the workshop is important to be able to follow the workshop timing precisely. See Tool T-4.2 for the list of necessary material and equipment needed for the workshops.

4.2 Conduction the workshop

4.2.1 Give orientation

After formal opening of the workshop, the facilitator should give an orientation. The purpose of the orientation is to:

- Provide a quick overview of the process
- Train the participants to speak the common language/terminology of the standard

The orientation is also the right time to stress how important is the contribution of the participants for developing a standard. See tools T-4.3 and T-4.4 for the agenda and the orientation slides.

4.2.2 Review Competency Profile

Competency profile is the foundation for developing the performance standard. It should be understood and agreed by the participants. The copy of the profile can be distributed to the participants or can be presented using multimedia projector. Much time should not be invested in this activity as the profile is developed through two workshops with the experts from the sub-sector.

4.2.3 Determine performance criteria for each element

Performance criteria set out clearly the quality of performance required in the professional work. During the test, evidences of the performances are checked against these criteria. Criteria are expressed in the workplace terms that also consists of underlying personal characteristics. Developers should consider:

Before: Appropriate preparatory works required for the preparation (E.g. gathering information, permission, tools, materials, taking measurements)

During: Performance of the core task/s (E.g. appropriate methods, OHS measures, wastage of materials)

After: Most performer overlook to fine tune the product, clean the workplace/tools/equipment, reporting and store back tools equipment in appropriate places which is an essential part of the competency.

Following are some of the examples of performance criteria from the F&B standard:

Element	Performance Standard
----------------	-----------------------------

Obtain & convey workplace information	<ul style="list-style-type: none"> • <i>Specific information</i> is accessed from <i>Appropriate Source</i> • Appropriate <i>communication method</i> is used to transfer information & ideas • Important information communicated with supervisors and colleagues following standard communication channel • Personal interaction is carried out clearly and precisely
Layout table linens	<ul style="list-style-type: none"> • Table are arranged and wobble free • Chairs are aligned straight to the table • Front legs of the chairs are pushed up to the edge of the table

4.2.4 Determine range of variable

In some cases, the Elements of Competency may not convey clearly the context(s) in which Performance Criteria are intended to apply. The circumstances in which competent performance is expected have been specified by a system called range of variables. The range statement allows for different work environments and situations that may affect performance. Range of variables indicates the circumstances in which the Performance Criteria apply. For example, a F&B service personnel should be competent in Anticipate guest needs and one of the performance criteria is attention given to the guest with special needs. The guest with special needs may vary and required different competency to give attention like:

- differently able
- special cultural or language needs
- unaccompanied children
- parents with young children
- pregnant women

Evidence guide

The evidence guide is critical in assessment as it provides information to assessor to interpret the assessment of the unit and it's contains. It describes the critical aspects of competence, such as:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment
- relationships with the assessment of any other units of competency
- suitable methodologies for conducting assessment, including the potential for workplace simulation
- resource implications, for example access to equipment, infrastructure, or situations
- how consistency in performance can be assessed over time, various contexts and with a range of evidence.

Example EG

	Evidence Guide		
--	----------------	--	--

11	Task Title: Maintain personal grooming, hygiene and sanitation Task No. 1	Location of test: Candidates Name: Assessor's Name:	
12	Test Factors and Items	Standard Met	Standard Not Met (Comment)
	Did the candidate? <ul style="list-style-type: none"> • Receive instruction, • Maintain personal hygiene and sanitation, • Wear appropriate uniform, • Display appropriate grooming, • Maintain hospitality etiquette. 		

4.2.5 Determine required knowledge

Related Knowledge is the knowledge a person needs to know to perform the element of competency to the set standard. Example knowledge required by F&B personnel:

- Way of Greetings in different culture
- Hospitable hygiene & grooming
- responsibilities of individual staff members serving alcohol

4.2.6 Determine required skills

The essential relevant Skills that the person needs to consistently carry out the Elements of Competence. Example skills required by F&B personnel:

- Handle glassware
- Hold serving tray
- Fill & submit requisition form

4.2.7 Determine tools/equipment/materials need

The performer needs tools, equipment, materials to perform any elements of competency. In many cases a competency can be performed using different types of tools and equipment. Therefore, in NCS the list of tools and equipment should be listed under each element that are expected to be used by the performer while conducting skill test.

4.2.8 Determine occupational health and safety

Occupational Health and Safety (OHS) are the precautional measures of all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards. OHS is an important part of NCS that ensures the performer competent to prevent accidents and harm to people and tools/equipment from work-related activities. Following are some example of OHS of F&B personnel:

- All items cleared from table should not be mixed with fresh ones.
- Dispose broken crockeries and glassware in define place.
- Avoid bare hand and consider safety precaution while handling breakages.

- Clean immediately in case of spillage during clearance.

4.3 Quality check and documentation

Quality of developed standard is of utmost importance since this is the stage leading to certification of people. Therefore, due attention is required at almost every stage of the development. However, the standard development Unit of NSTB once again final check at the time of documenting the standard.

4.3.1 Quality check during the data entry

After all inputs have been received and decided upon, the standard develop unit should ensure the quality of developed standards. At the time of data entry, the unit should once again check the standard and fine tune for documenting for its formal approval.

4.3.2 Integrate basic and sector common competencies

This guideline focused only on development of core competencies applicable for a sub sector only. Both basic and sector common competencies are developed separately. To make the standard complete, both basic and sector competencies should be added in the standard.

4.3.3 Assign code

The standard of NSTB are classified at different levels of aggregation to suit the needs of various data users: sector, sub-sector, unit of competencies as per the coding system of NSTB. However, the assigned code should be compatible to NSCO.

4.3.4 Obtain approval from the NSTB

The standard can only be used for the testing and certification, if it is approved by the NSTB. NSTB has the set rules for obtaining its approval.

4.3.5 Document the approved standard.

After obtaining approval from the board, the hard copy of the approved standard should be documented maintaining the filing system of the unit and the soft copies in the computer. The standard should also be uploaded on the NSTB website.

Product

Standard is developed in NCS standard format and derived from the competency profile. Part of the product sample of the sub sector F &B shown in the toolbox T-4.1

Standard Development Toolbox

Toolbox

Sectoral Mapping

T-4.1: Sample standard

Core Competences

UNIT OF COMPETENCY: Prepare the dining room/ restaurant area for service

UNIT CODE:

UNIT DESCRIPTOR: This unit of competency deals with the knowledge, skills and attitudes required in the preparation of the dining room / restaurant area before the start of the service operations. It involves opening duties or the dining room mise-en-place prior to service. This units includes the knowledge and skill in taking reservation, preparing service station, table setting and setting the ambiance of food service facility.

Element	Performance Standard	Range of variables	Related Knowledge	Related Skills
Clean Work Area	<ul style="list-style-type: none"> Housekeeping department is informed for cleaning Side station is dust and stain free 	Cleaning : <ul style="list-style-type: none"> Restaurant floor Walls Windows Ceiling 	<ul style="list-style-type: none"> Cleaning procedure of side station Different types of cleaning agent/materials 	<ul style="list-style-type: none"> Dusting Moping Brooming Vacuum cleaning Air freshening
Maintain Lighting	<ul style="list-style-type: none"> Lights are switched on as per the brightness required matching the ambience All lights & switches are observed in working condition Maintenance team is informed in case of broken switches or lights 	Light Lights may include: <ul style="list-style-type: none"> Wall lights Ceiling lights Lamps Decorative lights 		
Maintain Ventilation	<ul style="list-style-type: none"> Windows are opened for the flow of fresh air 		<ul style="list-style-type: none"> Situation for operating air condition 	<ul style="list-style-type: none"> Handle air condition

T-4.2: Material, equipment list for standard development workshop

No.	Activity	Tick box
1)	Invitation and release letters	
	Participants	
	Confirmations and follow-ups	
2)	Bookings	
	Venue (room, meals)	
	Equipment	
3)	Appointment of facilitators	
4)	Workshop materials	
	Multimedia projector and screen	
	Standard flash cards (50)	
	Chisel-edged markers 4 (Black, Blue and Red)	
	Pin boards for posting cards 1	
	4 sheets brown paper for pin boards	
	Glue stick	
	Diary ...(for participants)	
	Ball pen ...(for participants)	
5)	Support	
	Assign support assistant	
	Registration/Attendance sheet	

T-4.3: Agenda Standard Development Workshop

**Standard Development Workshop
for “.....”**

Date

Venue –

Time –

Purpose: Prepare the final draft NCS for

Objectives:

- Review the competency profile of the sub-sector
- Develop criteria and other additional information require for testing and certification.

Agenda

Day 1			
Time	Topic	Activity	Who
10:00	Registration	Registration of the participants	All
10:15	Introduction and welcome	Self-introduction of participants Welcome remarks and the purpose of the workshop by the Director NSTB	Moderator
10:30	Objectives and schedule	Objectives of the workshop Administrative details (schedule) The activity will be finished by A/P.M. Workshop ground rule	Moderator
10:45	Review CP	Review competency profile: Go through each elements of the competency profile using handouts or PPT slides Revise statements only if they are confusing or not understood.	Moderator
12:00		Lunch break	
13:00	Orientation	Presentation on the NOSS format and its elements with examples	Moderator
13:30	Develop a sample	Facilitate development of one unit of competency through discussion in the plenary. Write example standard on flip charts for later reference.	All
15:00	Tea break		
15:20	Develop a sample	Continue development of sample standard	All
16:30	Day close		
Day Two			
10:30	Review/Overview	Quick Review of the day 1, and Outlook of the day 2	Moderator

10:30	Group work	Development of standard in groups: <ul style="list-style-type: none"> • Develop standard in 2 small groups • Each group will develop standard for one given unit 	Participants
11:00		Tea break	
11:20	Plenary	Presentation and feedback of the group work: <ul style="list-style-type: none"> • Presentation of the outcome by each group • Feedback through moderated discussion • Finalization of the group work 	Participants/ Moderator
12:30	Lunch break		
13:30	Group work 2	Standard development of the remaining units <ul style="list-style-type: none"> • Same previous group • Divide remaining units to three and each group develops standards for the given units 	Participants
15:30	Tea Break		
13:50	Group work 2	Continue group work	Participants
16:30	Day close	Quick recap of the day Day close	Moderator
Day Three			
10:00	Review/Overview	Quick Review of the day 2, and Outlook of the day 2	Moderator
10:20	Presentation of the group work	Preparation for the presentation of the group work outcome	Participants
9:00	Presentation of group 1	Presentation of the group outcome by group 1 Moderated feedback on the outcome	Group 1/ Moderator
10:30	Tea break		
10:50	Presentation of group 2	Presentation of the group outcome by group 2 Moderated feedback on the outcome	Group 2/ Moderator
12:30	Lunch break		
13:30	Group work	Revision of the standards as per the feedback given in the plenary by all three groups	Groups
15:00	Tea Break		
15:20	Way forward	Recap of the outcome Inform participant about the next steps of the process	Moderator
16:00	Closing	Closing remarks by the Director NSTB	NSTB

T-4.3: Orientation Slides for Standard Development Workshop

Slide 1

Council for Technical Education and vocational Training

National Skill Testing Board

Welcome

NCS Development Workshop

Date:
Venue:

Slide 2

Objectives

Develop National Competency Standard (NCS) and its components of the sub sector Following outcomes are expected from the workshop:

- Participants will have common understanding of NSTB process/procedure and terms used in the National Competency Standard (NCS),
- A short description of all units are developed,
- Elements are identified for each units and their performance criteria, required knowledge and skills are identified,
- Required range of variables for each elements are listed,
- Occupations are arranged according to the its sub sector and NSTB levels

Slide 3

To achieve the objectives

- Familiarize with format and terminologies
- Discuss NVQS level descriptor
- Discuss Core competency standard

Slide 4

UNIT OF COMPETENCY : OPERATING WORD PROCESSING SOFTWARE			
UNIT CODE:			
UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements. It includes, Customize word processing software, Create word document, create tables, Add illustration, Perform mail merge operation, format document & Print document.			
ELEMENTS	PERFORMANCE CRITERIA (Indicates terms are explained in the range of variables)	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Customize word processing software	1.1 Workstation is arranged in accordance with computer workstation ergonomics guidelines * 1.2 Tools, equipment and materials are prepared in accordance with task requirement. 1.3 Word processing software is personalized in accordance with task requirement. *	1. Computer workstation ergonomics guidelines 2. Use of tools, equipment 3. Word processing software 4. Customization of word processing software	1.1 Arranging workstation 1.2 Collecting tools and equipment 1.3 Customizing/personalizing word processing software
2. Create word document	2.1 Required information's are collected in accordance with organization practice. 2.2 Documents are prepared in accordance with task requirement. * 2.3 Documents are stored in accordance with organization practice. *	2.1 Information gathering 2.2 Document preparing process 2.3 Document storing and file type	2.1 Collecting information 2.2 Communication skills 2.3 Preparing document 2.4 Typing skills (English and Nepali) 2.4 Storing document

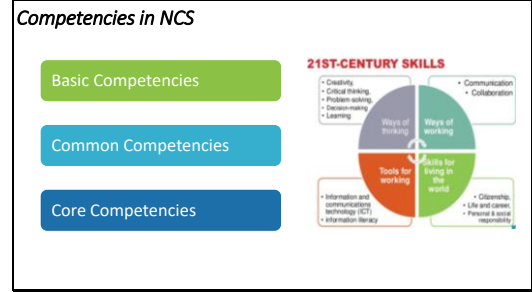
Slide 5

RANGE OF VARIABLE	
Variable	Range
1 Computer workstation ergonomics guidelines	May include: 1.1 neutral 1.2 relax 1.3 idle 1.4 typing posture
2 Tools, equipment and materials	May include: 2.1 Computer system 2.2 Printer 2.3 Scanner 2.4 Extension cord 2.5 Line tester 2.6 A4 Papers
3 Word processing software	May include: 3.1 Microsoft word 3.2 Office 360 3.3 Libre office 3.4 Open org 3.5 Google doc

Slide 6

EVIDENCE GUIDE	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate</p> <ul style="list-style-type: none"> 1.1 Arranged workstation in accordance with <i>computer workstation ergonomics guidelines</i>. 1.2 Personalised word processing software in accordance with task requirement. 1.3 Prepared documents in accordance with task requirement. 1.4 Stored documents in accordance with organization practice. 1.5 Inserted standard table into document in accordance with task requirement. 1.6 Inserted appropriate illustrations into document in accordance with task requirement. 1.7 Added recipients for mail merge in accordance with task requirement. 1.8 Formatted documents in accordance with organization practice or task requirement. 1.9 Configured printer printed in accordance with task requirement.
2. Resource implication	<p>Following Resources must be provided:</p> <ul style="list-style-type: none"> 2.1 Computer system with word processing program 2.2 Printer, paper and materials.
3. Methods of assessment	<p>Competency in this unit assessed through:</p> <ul style="list-style-type: none"> 3.1 Written test 3.2 Demonstration with Oral questioning.
4. Context of assessment	<p>7.1 Competency may assess in the actual workplace or at the designated CTEVT Accredited assessment centre.</p>

Slide 9



Slide 7

Competency

The knowledge, skills and attitudes required to complete a work activity to the standard expected in the workplace.

Four Dimensions of Competency:

- **Task skills:** specific skills needed to do the task as described in the unit of competency
- **Task management skills:** Effective management of a number of interrelated tasks, all of which make up the job outcome being assessed.
- **Contingency skills:** The ability to cope with irregularities or breakdowns in routine
- **Job/Environment management skills:** Dealing effectively with the expectations of their work environment, working well with others and under instruction as required.

Slide 10

Elements of Competencies

The activities that workers need to be able to carry out in order to fully perform the unit.

The building blocks which make up the unit.

Slide 8

Example

Task skills	Copy documents using photocopier
Task management skills	Select right paper and functions
Contingency skills	Clear paper jams
Job/environment management skills	Cooperate with team members on print job requirements

Slide 11

Performance Criteria

The criteria set and used by the occupation in determining whether a task has been performed in a satisfactory manner. The performance standard specify the required performance in relevant tasks, skills and in the applied knowledge that enables competent performance.

Eg:

Workstation is arranged in accordance with *computer workstation ergonomics guidelines*.

Slide 12

example

Performance criteria:

- 1.1 Work area and seating are set up according to workplace ergonomic standards
- 1.2 Cutting equipment is cleaned, checked and basic servicing assessed in accordance with manufacturer's instructions
- 1.3 Materials are collected and laid out in correct proximity and sequence in accordance with workplace procedures

Slide 15

Related knowledge

Facts (What)
 For example: different types of equipment, color code, required materials, different types of customer needs

Slide 13

Range of Variables

The range statement allows for different work environments and situations that may affect performance.

It provides a context for the unit of competency, describing essential operating conditions, depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

It provides guidelines on different situations and contexts.

Slide 16

Principles/Rationale (Why)

- The reasons why cooked and uncooked meat must be stored separately
- Why customers should be made to feel welcome in the hotel
- Why the registration card needs to be completed correctly

Methods (How)

- How to avoid cross contamination,
- How to meet the needs of a customer in a wheel-chair,
- How to design a fitness programme for someone with a history of heart disease

Slide 14

Range of Variables

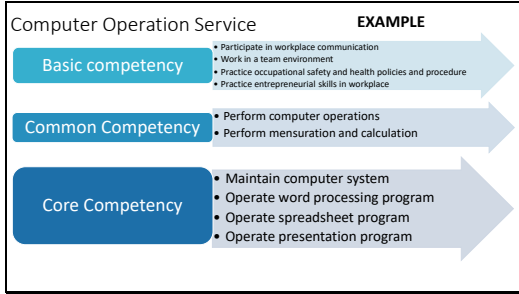
Variable	Range
Computer workstation ergonomic guidelines	Typing posture Neutral position Relax Ideal
Word processing program	Microsoft word Google Doc Open office writer

Slide 17

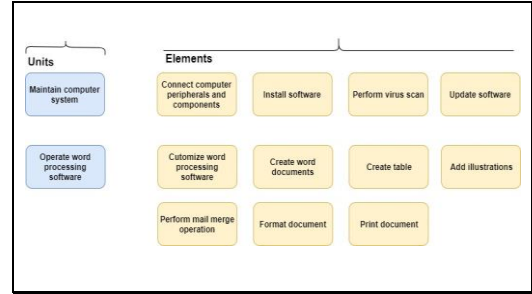
Evidence guide

- The purpose of the Evidence Guide is to guide the assessor in the collection of evidence.
- Evidence Guides must relate directly to elements and performance criteria and range of variables.
- **There are four sections in**
Critical Aspects of Competency: Evidence that is essential for successful performance.
Resource Implications: Tools, equipment, materials, Work environment and conditions
Methods of Assessment: Demonstration, oral questioning, written
Context of Assessment: Workplace, simulated environment

Slide 23



Slide 24



Slide 25

Thank You!

Glossary

Glossary

Action Verb

A word that conveys action/behaviors and reflects the type of performance that is to occur (i.e., place, cut, drive, open, hold). Action verbs reflect behaviors that are measurable, observable, verifiable, and reliable.

Attitude

The mental state of a person that influences behavior, choices, and expressed opinions towards a job or task.

Brainstorming

A technique used in a focus session to gather input by triggering thoughts at a fast pace from the participants on specific issues.

Competency

Demonstrated ability (including knowledge, skills and attitudes) to perform a task successfully according to an established standard.

Competency Profile

A graphic portrayal of all the statements of unit and element of competencies important to workers in each sub-sector.

Criteria

The standard by which the performance of the test taker is evaluated to decide whether he/she is competent or not.

Check List

A job aid used to determine or ensure a process or procedure is followed. The elements of the activity are listed in the execution sequence.

Core Competency

Competencies that must be performed by the workers from a subsector of a job market for successful functioning of the sub-sector.

Equipment

An integrated group of materials or devices used for a particular purpose.

Evaluation

Judging the value of "something" for a given purpose using definite criteria.

Facilitator

An individual whose primary job is to create a supportive environment in which the participants is free to take risks. One who "draws out, not pours in." (Lindeman)

Flow Chart

A diagram that provides a picture of how a process flows.

Occupation

The title applied to a specified list of duties and responsibilities performed by a person for the usual purpose of earning a living.

Performance Standard

The criteria used by the occupation in determining whether a task has been performed in a satisfactory manner.

Process

The distinctive skills that must be applied, the body of knowledge to be imparted, and the sequence of events that must take place.

Product

The object created after or service provided during the performance of a task.

Related Technical Knowledge

The minimum knowledge (facts, concepts, principles and procedures) required to perform a task in a complete and accurate manner.

Sector

A sector is a part or a division of the activities in an economy. i.e. Engineering, Health, Tourism and hospitality...)

Services

Services are economic products which are not tangible. They cannot be stored and have no physical embodiment. They may include elements which are goods - for example, when a meal is served in a restaurant, the food itself is tangible, but its preparation by the cook and its presentation to the consumer by the waiter are services.

Standard

That part of a performance objective or a criterion-referenced measure which describes how well or to what proficiency level a task must be performed.

Task

A specific, observable unit of work complete in itself (having a definite start and end point) which can be broken down into two or more steps and performed in a limited period of time that when completed results in a product, service, or decision and is something a worker is normally paid to do. Typical occupations consist of 100-300 specific tasks.

Tool

An item used to help or enable the hand to apply, control or focus force.

Validation

The process involving verification of the information (i.e. outcome of a workshop) for the purpose of determining information is valid.

Worker

A person who is currently employed in a job or has been working in that job within the last two years.