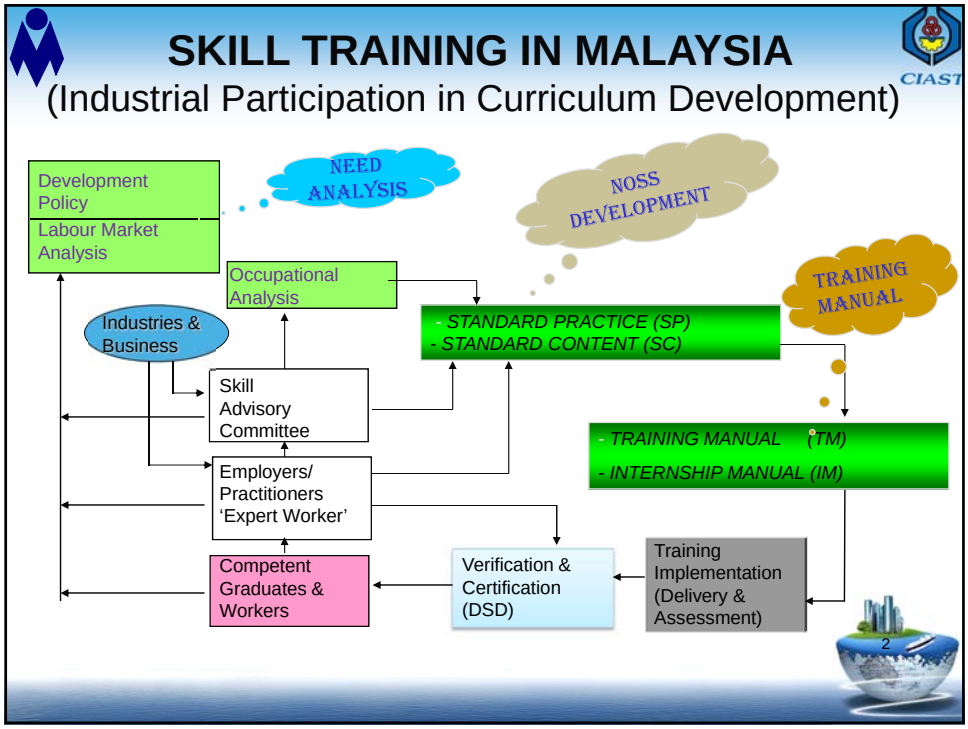
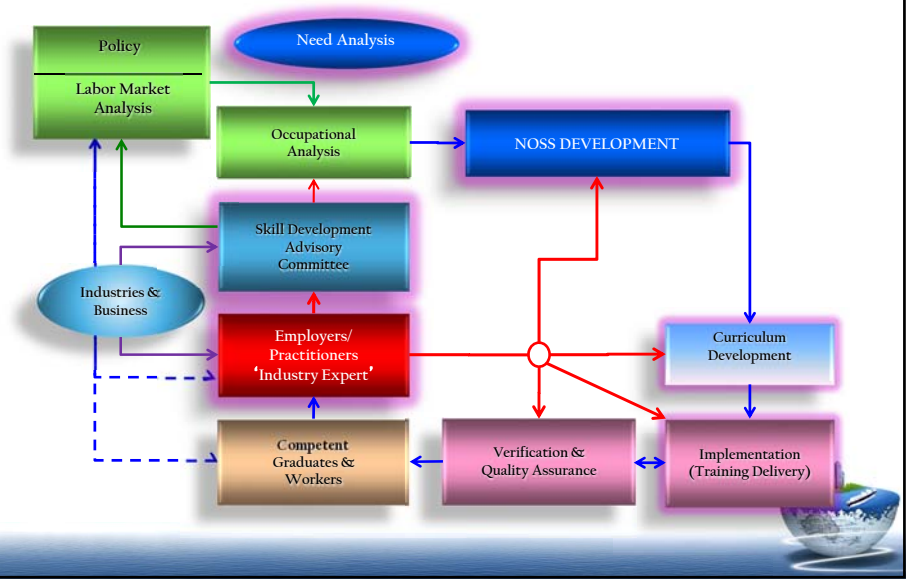
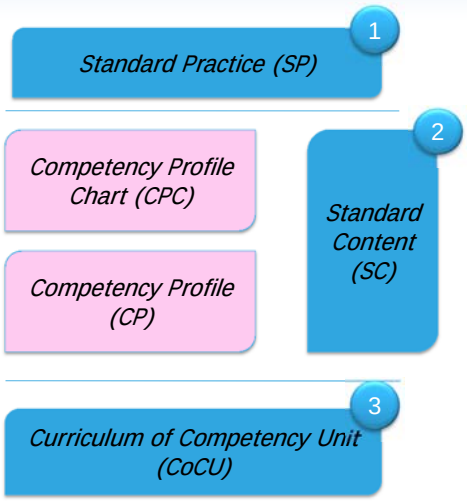
NOSS DEVELOPMENT
(DESCUM)
Pusat Latihan Pengajar & Kemahiran Lanjutan (CIAST)
Jabatan Pembangunan Kemahiran (JPK)
Kementerian Sumber Manusia
Shah Alam Selangor


SKILL TRAINING IN MALAYSIA
(Industrial Participation in Curriculum Development)
CIAST
Development Policy
Labour Market Analysis
NEED ANALYSIS
NOSS DEVELOPMENT
Occupational Analysis
TRAINING MANUAL
Industries & Business
- STANDARD PRACTICE (SP)
- STANDARD CONTENT (SC)
Skill Advisory Committee
- TRAINING MANUAL (TM)
- INTERNSHIP MANUAL (IM)
Employers/ Practitioners 'Expert Worker'
Competent Graduates & Workers
Verification & Certification (DSD)
Training Implementation (Delivery & Assessment)
2

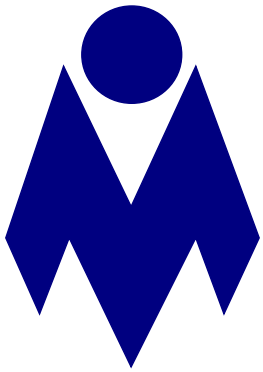
SKILL TRAINING IN MALAYSIA
(Industrial Participation in Standard & Curriculum Development)



STRUKTUR DOKUMEN NOSS (PAKEJ NOSS)



NOSS DEVELOPMENT PREPARATION

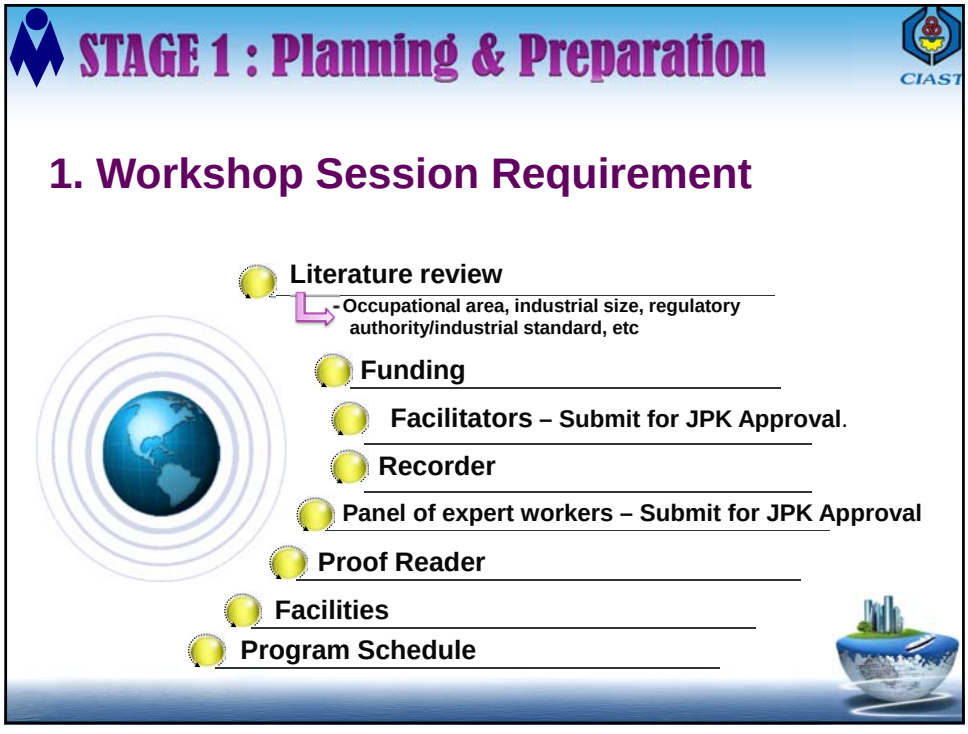


Stages of NOSS Development

Stage Of NOSS Development

- **Stage One** — *Planning and Preparation* NOSS Development Session
- **Stage Two** — *Conducting* NOSS Development Session
- **Stage Three** — *Compilation and Validation* Findings
- **Stage Four** — *Validated* by other practitioners (JPPK & expert)
  Editing and Compilation
  Submit for Approval (MPKK)

CIAST
STAGE 1
NOSS Development
Planning and Preparation
NOSS Development Session


STAGE 1 : Planning & Preparation
CIAST
1. Workshop Session Requirement
Literature review
- Occupational area, industrial size, regulatory authority/industrial standard, etc
Funding
Facilitators – Submit for JPK Approval.
Recorder
Panel of expert workers – Submit for JPK Approval
Proof Reader
Facilities
Program Schedule

STAGE 1 : Planning & Preparation

2. NOSS Facilitation Requirements

- Certified DESCUM facilitator - Occupational
- Excellent in facilitation skills
- Language proficiency in English and Bahasa Melayu (speaking and writing)

Cont...

STAGE 1 : Planning & Preparation

3. Strategies for finding participants

- Contacting stakeholders/regulatory body
- Industrial association /ILB
- Contacting professional agencies /association.
- Daftar Pakar Industri Negara (DPIN)
- Former Students
- Business directories and database
- Utilizing institutional contacts and networks
- OA development panels

Cont...

STAGE 1 : Planning & Preparation

4. Session Logistics and Preparations

4.1 Human Resource Planning

- Identification of DESCUM facilitation team
- Identification of Primary contact Coordinator
- Confirmation of Participant
  - Represent the industry sector
  - Consent and approval from employer
- Travel and Accommodation Arrangements
- Team Preparation

Cont...

STAGE 1 : Planning & Preparation

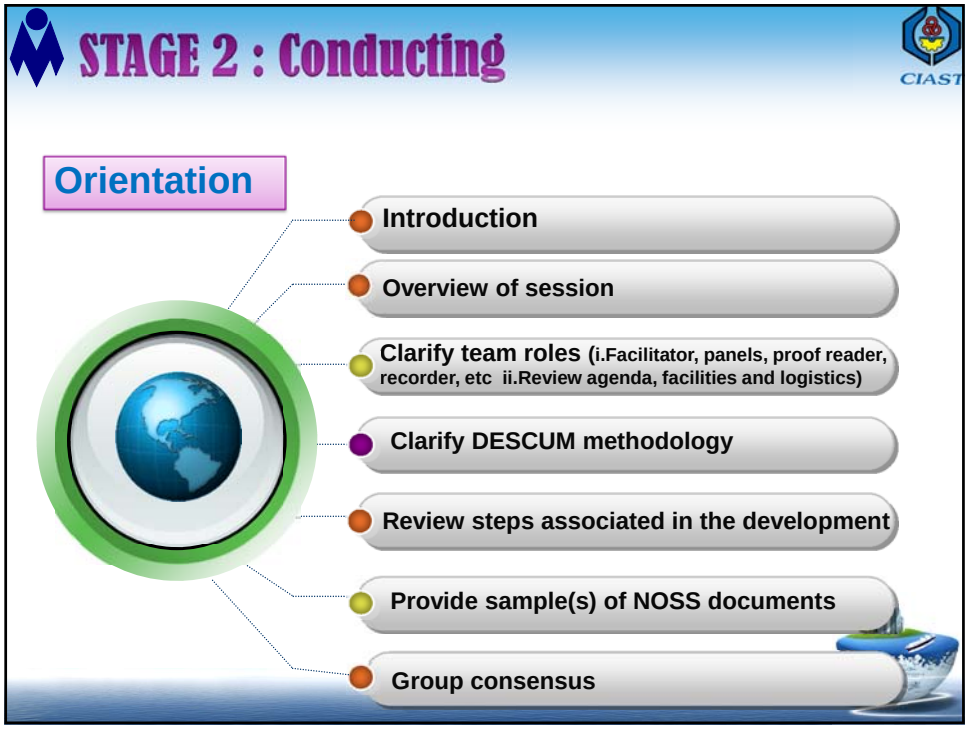
4. Session Logistics and Preparations

4.2 Facilities and Supplies

- Location and Room Arrangements
- Meal Arrangements and Refreshments
- Supplies
- Supporting documents
- Equipment / Materials

Cont...

CIAST
STAGE 2
NOSS Development
Conducting NOSS Development Session


STAGE 2 : Conducting
CIAST
Orientation
Introduction
Overview of session
Clarify team roles (i.Facilitator, panels, proof reader, recorder, etc ii.Review agenda, facilities and logistics)
Clarify DESCUM methodology
Review steps associated in the development
Provide sample(s) of NOSS documents
Group consensus

STAGE 2 : Conducting

NOSS DEVELOPMENT DEVELOPING PROCESS

Process		Product
Start		
Activity A: Occupational Analysis (OA)	→	Occupational Structure (OS)
Activity B: Occupational Area Analysis (OAA)	→	Occupational Area Structure (OAS)
Activity C: Job Analysis (JA) + Competency Analysis	→	Competency Profile Chart (CPC)
Activity D: Competency Profile Analysis (CPA)	→	Competency Profile (CP)
Activity E: SP Development	→	Standard Practice (SP)
Activity F: Proofread and validation		
Activity G: CoCU Development	→	CoCU
Activity H: Proofread and validation		
Activity I: MPKK Approval		
End		

Cont...

STAGE 2 : Conducting

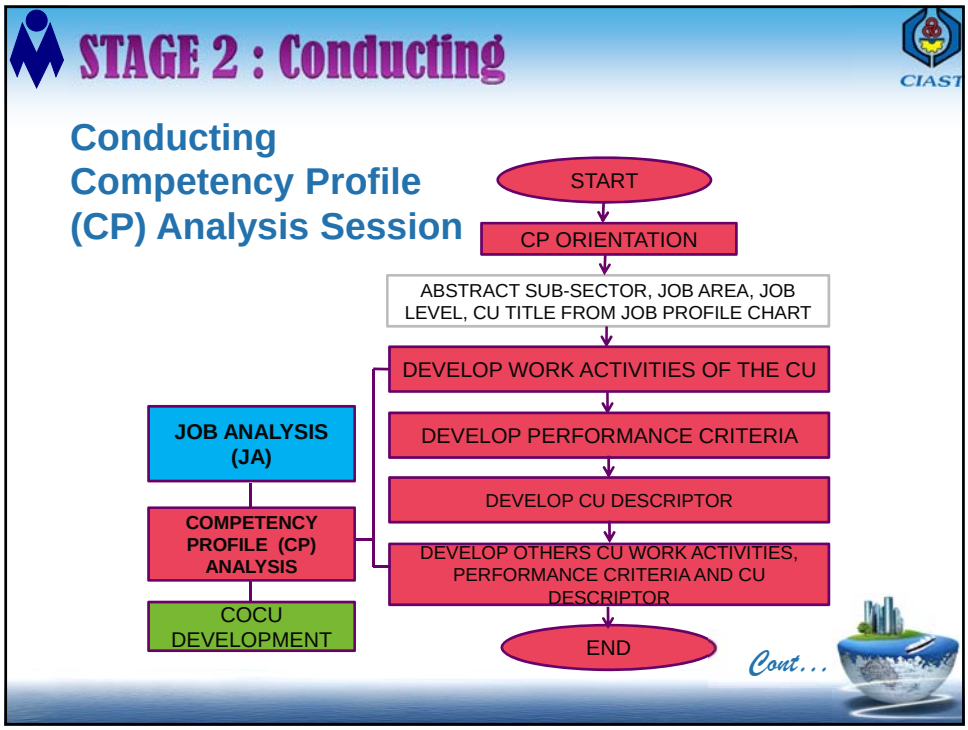
Conducting Job Analysis (JA) Session

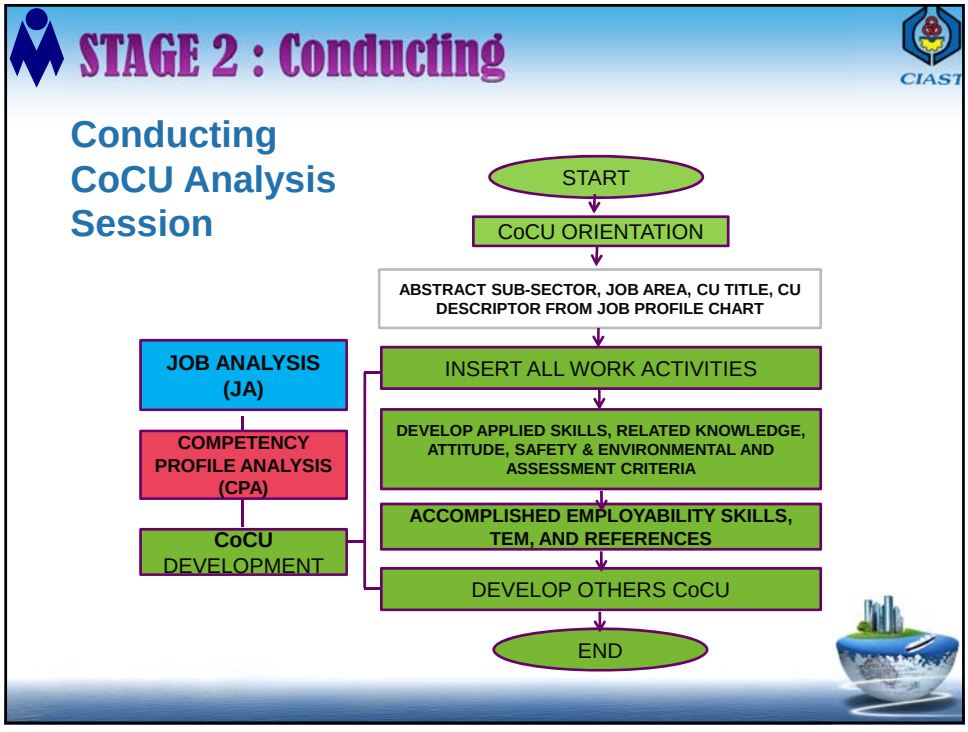
- Review existing OA
- Develop OA

START
INTRODUCTION
OCCUPATIONAL AREA ANALYSIS (OAA)
PRESENT LITERATURE REVIEW
BRAINSTORM JOB PROFILE
IDENTIFY WORK ACTIVITY
REVIEW & CLUSTER
END

JOB ANALYSIS (JA)
COMPETENCY PROFILE ANALYSIS
CoCU DEVELOPMENT

Cont...

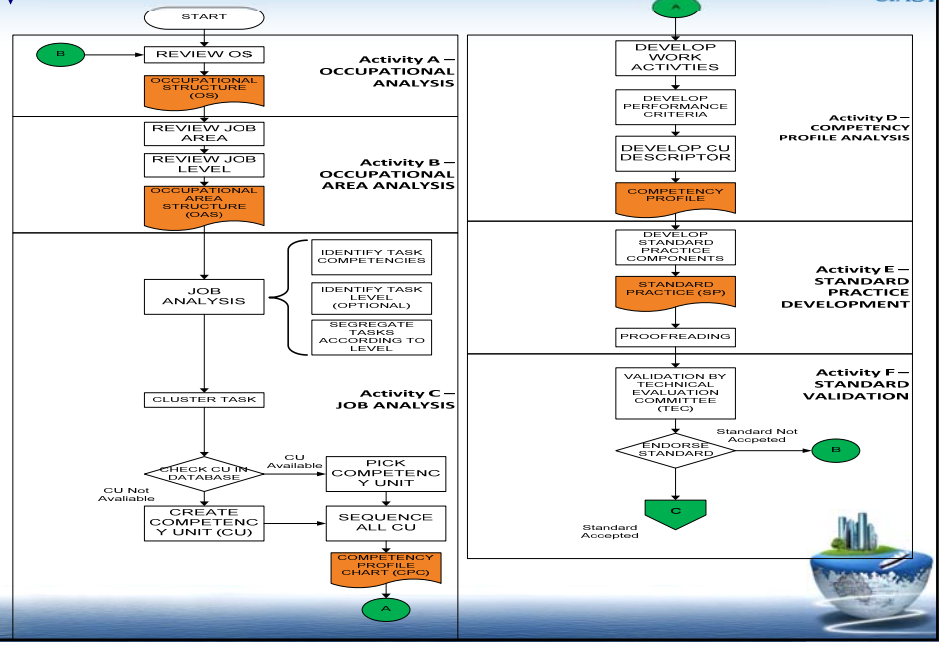

STAGE 2 : Conducting
CIAST
Conducting Competency Profile (CP) Analysis Session
START
CP ORIENTATION
ABSTRACT SUB-SECTOR, JOB AREA, JOB LEVEL, CU TITLE FROM JOB PROFILE CHART
DEVELOP WORK ACTIVITIES OF THE CU
DEVELOP PERFORMANCE CRITERIA
DEVELOP CU DESCRIPTOR
DEVELOP OTHERS CU WORK ACTIVITIES, PERFORMANCE CRITERIA AND CU DESCRIPTOR
END
JOB ANALYSIS (JA)
COMPETENCY PROFILE (CP) ANALYSIS
COCU DEVELOPMENT
Cont...

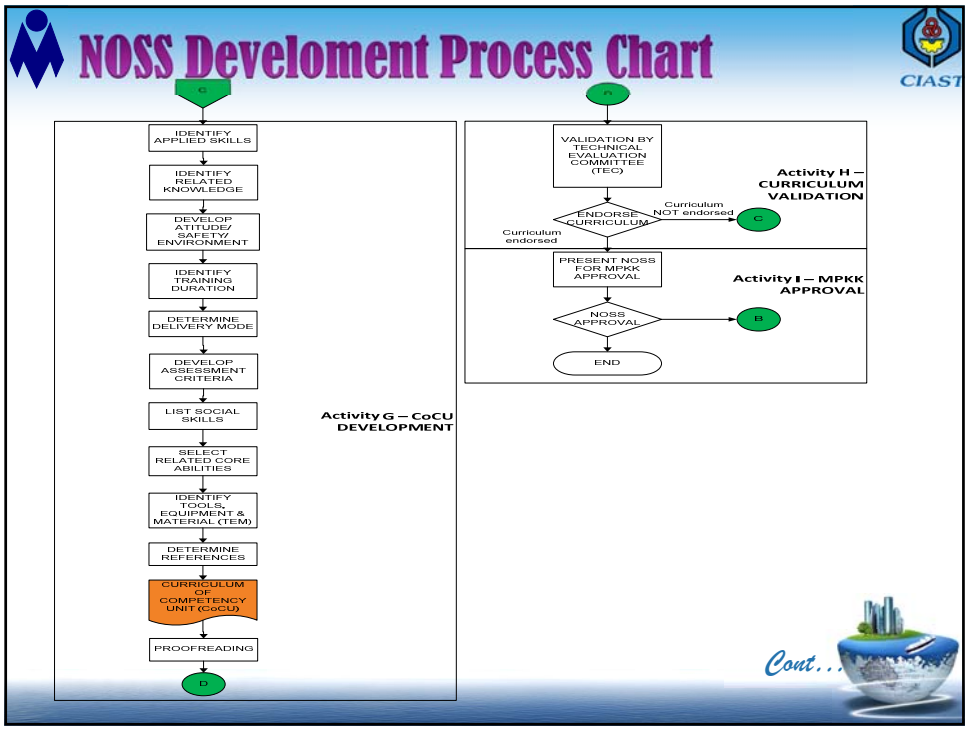

STAGE 2 : Conducting
CIAST
Conducting CoCU Analysis Session
START
CoCU ORIENTATION
ABSTRACT SUB-SECTOR, JOB AREA, CU TITLE, CU DESCRIPTOR FROM JOB PROFILE CHART
INSERT ALL WORK ACTIVITIES
DEVELOP APPLIED SKILLS, RELATED KNOWLEDGE, ATTITUDE, SAFETY & ENVIRONMENTAL AND ASSESSMENT CRITERIA
ACCOMPLISHED EMPLOYABILITY SKILLS, TEM, AND REFERENCES
DEVELOP OTHERS CoCU
END
JOB ANALYSIS (JA)
COMPETENCY PROFILE ANALYSIS (CPA)
CoCU DEVELOPMENT

JPK/DSD

NOSS Development Workshop Session

NOSS Development Process Chart




NOSS Develoment Process Chart
CIAST
C
IDENTIFY APPLIED SKILLS
IDENTIFY RELATED KNOWLEDGE
DEVELOP ATITUDE/ SAFETY/ ENVIRONMENT
IDENTIFY TRAINING DURATION
DETERMINE DELIVERY MODE
DEVELOP ASSESSMENT CRITERIA
LIST SOCIAL SKILLS
SELECT RELATED CORE ABILITIES
IDENTIFY TOOLS, EQUIPMENT & MATERIAL (TEM)
DETERMINE REFERENCES
CURRICULUM OF COMPETENCY UNIT (CoCU)
PROOFREADING
D
Activity G – CoCU DEVELOPMENT
A
VALIDATION BY TECHNICAL EVALUATION COMMITTEE (TEC)
ENDORSE CURRICULUM
Curriculum NOT endorsed
C
Curriculum endorsed
Activity H – CURRICULUM VALIDATION
PRESENT NOSS FOR MPKK APPROVAL
NOSS APPROVAL
B
END
Activity I – MPKK APPROVAL
Cont...

CIAST
OCCUPATIONAL ANALYSIS

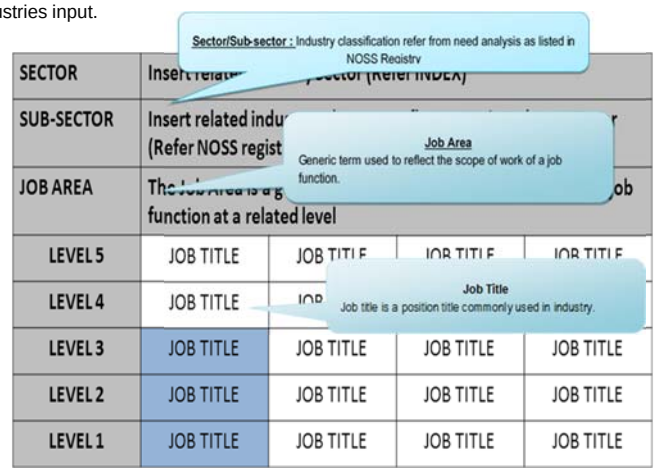
Occupational Analysis

Occupational Analysis (OA) is an identifying the industry sector, subsector, Job Area, Job Titles and Level of an occupation based on information gathered from needs analysis or industries input. **The product of this process is an Occupational structure (OS)** and Occupational Definition.

Its purpose is to analyze skilled human resource competency requirement for labour industry. Occupational Analysis development is a **preliminary process in developing a National Occupational Skills Standard – NOSS** and it is developed together with industry experts in their related fields.

Occupational Structure

Occupational Structure is a table shows career pathway for particular occupation derived from Occupational Analysis (OA) process. This table describes the Industry Sector, Sub-sector, Job Area, Job Title and Level of an occupation based on information gathered from needs analysis or industries input.



SECTOR	Insert relat… (Refer INDEX)			
SUB-SECTOR	Insert related indu… (Refer NOSS regist…			
JOB AREA	The … function at a related level			
LEVEL 5	JOB TITLE	JOB TITLE	JOB TITLE	JOB TITLE
LEVEL 4	JOB TITLE	JOB…		
LEVEL 3	JOB TITLE	JOB TITLE	JOB TITLE	JOB TITLE
LEVEL 2	JOB TITLE	JOB TITLE	JOB TITLE	JOB TITLE
LEVEL 1	JOB TITLE	JOB TITLE	JOB TITLE	JOB TITLE

OS Table Format

Example of Occupational Structure

SECTOR	HOSPITALITY AND TOURISM				
SUB SECTOR	FRONT OFFICE				
JOB AREA / LEVEL	GUEST SERVICE	TELEPHONE OPERATION	FRONT OFFICE SERVICE	CONCIERGE	RESERVATION
LEVEL 5	FRONT OFFICE MANAGER (FOM)				
LEVEL 4	ASSISTANT FRONT OFFICE MANAGER (AFOM)			CONCIERGE MANAGER	RESERVATION MANAGER
LEVEL 3	GUEST SERVICE OFFICER	TELEPHONIST SUPERVISOR	FRONT OFFICE SUPERVISOR	BELL SUPERVISOR	RESERVATION OFFICER
LEVEL 2	GUEST SERVICE ASSISTANT	TELEPHONIST	FRONT OFFICE ASSISTANT	BELL CAPTAIN	RESERVATION CLERK
LEVEL 1	NO LEVEL	NO LEVEL	NO LEVEL	DOORMAN	NO LEVEL

Table 1: Example OS for Front office

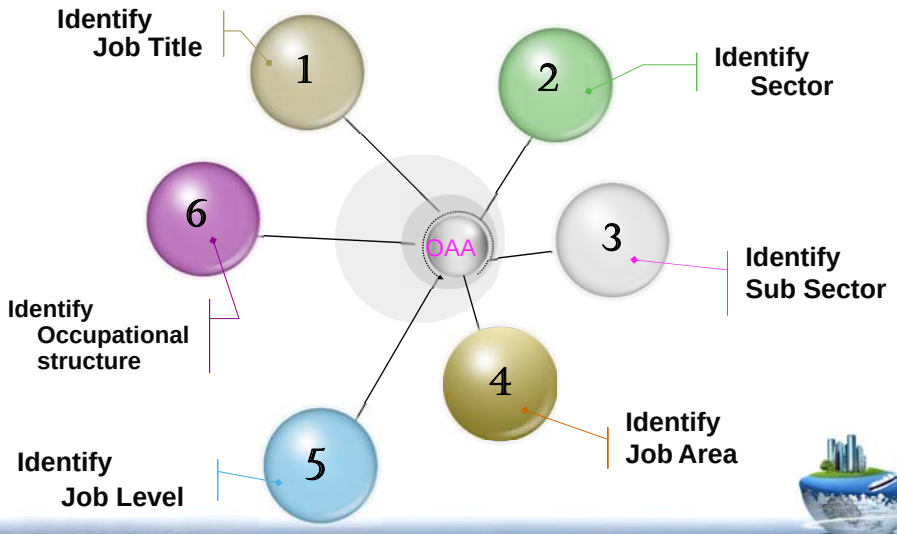
Occupational Area Analysis

OAA is a process of reviewing the **Occupational Area from the OS to produce Occupational Area Structure (OAS).** The objective of OAA is to confirm the area which have similar in the competency's among the Job titles.

The outcome of the OAA is the merging of areas (horizontally) and levels (vertically) within the sector. This eventually results to multi-skilling and multi-tasking due to sharing of competencies between areas and levels. **Nevertheless in certain cases, due to requirement of industry or regulation, merging is not necessarily required**.

Is the phase conducted for an occupational area **survey and review the scope of works of a particular profession**. The content of the survey ultimately enhance the development and determination of the elements of competency, outcomes and the significant functions and tasks that make up the **competency related to sub-sector/job area.**

Aims of OAA is to...



OAA Development Process

Session Process

- Obtain existing Occupational Structure or
- Develop and propose new Occupational Structure through OAA session;
- Lists the different area of works using brainstorming approach

Session Process

- Review and refine the Occupational Structure to confirm Job Title, Sector, Sub-sector, Job Area and Job Level
- Review and analyze the Occupational Structure to determine related industry occupational functions ultimately enhance the development of NOSS

During OAA, job functions from related job title are being cl[illegible] on the following factors;-

1. Current industry needs
2. Regulatory/ statutory body
3. Industry recognition
4. Relevancy between job area
5. Employability opportunity

Occupational Area Structure Format

SECTOR	Insert Related Industry Sectror (Refer NOSS Registry)			
SUB-SECTOR	Insert Related Industry Sub-Sector Reflect to Main Industry Sector			
JOB AREA	The generic term to reflect the scope of workof a job function at related level			
LEVEL 5	NOSS TITLE		NOSS TITLE	
LEVEL 4	NOSS TITLE		NOSS TITLE	
LEVEL 3	NOSS TITLE	NOSS TITLE	NOSS TITLE	
LEVEL 2	EMBEDDED TO L3	EMBEDDED TO L3	NOSS TITLE	NOSS TITLE
LEVEL 1	EMBEDDED TO L3	NIL	EMBEDDED TO L2	EMBEDDED TO L2

OAS Table Format

Example of Occupational Area Structure

SECTOR	HOSPITALITY AND TOURISM				
SUB SECTOR	FRONT OFFICE				
JOB AREA / LEVEL	GUEST SERVICE	TELEPHONE OPERATION	FRONT OFFICE SERVICE	CONCIERGE	RESERVATION
LEVEL 5	GUEST SERVICES MANAGEMENT				
LEVEL 4	GUEST SERVICES MANAGEMENT				
LEVEL 3	GUEST SERVICES OPERATION				
LEVEL 2	EMBEDDED TO L3				
LEVEL 1	NIL				

Table 2: Example OAS for Front office

Definition of Levels (1-3)

Level 1 :

'Competent in performing a range of varied work activities, most of which are **routine and predictable**'

Level 2 :

'Competent in performing a **significant range** of varied work activities, performed in a variety of context. **Some** of the activity are **non-routine** and required individual responsibility and autonomy'

Level 3 :

'Competent in performing a **broad range** of varied work activities, performed in a variety of context, **most** of which are **complex and non-routine**. There is considerable responsibility and autonomy and control or guidance of others is often required'

Definition of Levels (4-5)

Level 4 :

'Competent in performing a broad range of **complex technical or professional** work activities performed in a **wide variety of context** and with a substantial degree of personnel responsibility and autonomy. **Responsibility for the work of others** and allocation of resources is often present'

Level 5 :

'Competent in **applying** a significant range of **fundamental principles and complex techniques** across a wide and often **unpredictable** variety of context. Very substantial personal autonomy and often significant **responsibility for the work of others** and for the allocation of substantial resources feature strongly, as do personal accountabilities for **analysis and diagnosis, design, planning, execution and evaluation'**

Definition of Levels (6-7)

Level 6 :

Competent in this level reflects the ability to **refine** and use relevant understanding, methods and skills to address **complex problems that have limited definition**. It includes taking responsibility for planning and developing courses of action **that are able to underpin substantial change or development, as well as exercising broad autonomy and judgment.** It also reflects an understanding of different perspectives, **approaches of schools of thought and the theories that underpin them.**

Level 7 :

Competent in this level reflects the ability to **reformulate** and use relevant understanding, methodologies and approaches to address **problematic situations** that involve many interacting factors. It includes taking responsibility for **planning and developing** courses of action that initiate or underpin substantial change or development, as well as exercising broad autonomy and judgment. It also reflects an understanding **of theoretical and relevant methodological perspectives, and how they affect their area of study or work**.

At this point, these levels are not govern by NASDA 2006, Act 652

Definition of Levels (8)

Level 8 :

Competent in this level reflects the **ability to develop original understanding** and extend an area of knowledge or professional practice. It reflects the ability to address problematic situations that involve many complexes, interacting factors through initiating, designing and undertaking research, development or strategic activities. It involves the exercise of broad autonomy, judgement and leadership in sharing responsibility for the development of a field of work or knowledge, or for creating substantial professional or organizational change. It also reflects a critical understanding of relevant theoretical and methodological perspectives and how they affect the field of knowledge or work

At this point, these level is not govern by NASDA 2006, Act 652

Job and Competency Analysis

CIAST

Job Analysis (JA) is a process of **identifying the duties, tasks, job functions and responsibilities of an occupation.** In normal practice, **brainstorming technique among subject matter experts or practitioners is being applied**. The outcome of the brainstorming session is best written on cards or printed paper and posted on walls to allow the panel members to have an overall visualisation of the competencies. Ensure exhaustive analysis of job profile has been done in order to ensure all related tasks are covered.

Then related tasks identified in JA are then being **selected to form the Competency Units (CU)** in Competency Analysis session.

A CU reflects a meaningful unit of work, which contains several activities to complete a work cycle. The outcome of the session is a list of CU's to make the Competency Profile Chart (CPC).

Job Analysis : Methods

- Questionnaires/surveys
- Face to face - interview
- Observation
- Log book
- Brainstorming Session
  - DACUM, DESCUM, CUDBAS

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Job and Competency Analysis Development Process

Session Process

- Orientation of panel / committee
- Confirm the job area, job title and Job Level from OAA
- Lists the competency area and encapsulate the area of job functions
- Clustering & Mapping of job activities to competency unit

Session Process

- Leveling of competency unit
- Identification of Core Competency
- Identification of Elective Competency

Definition of Core & Elective Competency Unit

CPC consist of core and elective competency units

CORE

Core Competency unit is classified as generic and essential competencies required for a particular occupation

ELECTIVE

Elective Competency unit is classified as related additional competencies and relevant to the particular occupation.

" Upon completing the list, the CU's are then categorised into core and elective competency based on industrial needs"

Core & Elective Competency Unit

CORE COMPETENCY UNIT

- Reflect **core** functions for a particular job area
- To meet full Certification requirements (SKM/DKM/DLKM)

ELECTIVE COMPETENCY UNIT

- Reflect **complementary/elective** functions for a particular job area
- To meet competency Certification requirements

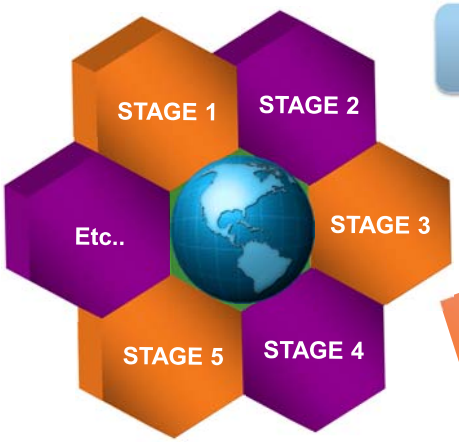
Competency Unit (CU)

COMPETENCY UNIT

- Reflect job functions
- Written in the form of **Qualifier + Object**
- Must be independent (Stand Alone)
- Considering the Holistic Aspect
- Reflect meaningful unit of work, which contains several activities in complete a work cycle objectively
- Certification requirements

Use DACUM card for visualization the job functions

EXAMPLES: JOB ANALYSIS PROCESS APPROACH



STYLE 1

Examples : Task identified for a beautician to perform tasks in the area of Beauty and Aesthetics.

01

STAGES

- List all duties, tasks, job functions and responsibilities of an occupation.

- CARRY OUT HAND AND NAIL ANALYSIS
- CARRY OUT WATER MANICURE
- CARRY OUT HOT OIL MANICURE
- CARRY OUT FINGER NAILS VARNISHING
- VERIFY MANICURE WORKS
- CARRY OUT FOOT AND NAIL ANALYSIS
- CARRY OUT WATER PEDICURE
- CARRY OUT HOT OIL PEDICURE
- CARRY OUT TOE NAILS VARNISHING
- VERIFY PEDICURE WORKS

Examples : Identify tasks, levelling and segregate the task according to level

02

STAGES

Cluster list duties, tasks, job functions and responsibilities of an occupation by similarity in process flow, complete work cycle, procedures, tools and equipment etc, according to level of complexity and responsibility as shown.

CARRY OUT FOOT AND NAIL ANALYSIS	CARRY OUT WATER PEDICURE	CARRY OUT HOT OIL PEDICURE	CARRY OUT TOE NAILS VARNISHING	VERIFY PEDICURE WORKS
CARRY OUT HAND AND NAIL ANALYSIS	CARRY OUT WATER MANICURE	CARRY OUT HOT OIL MANICURE	CARRY OUT FINGER NAILS VARNISHING	VERIFY MANICURE WORKS

Legend : Identified related tasks; Not related tasks

Examples : Tasks clustering and naming CU title

03

STAGES

Sequencing of the clustered duties, tasks, job functions and responsibilities of an occupation is shown

CARRY OUT HAND AND NAIL ANALYSIS		CARRY OUT WATER MANICURE		CARRY OUT FINGER NAILS VARNISHING		CARRY OUT FOOT AND NAIL ANALYSIS		CARRY OUT WATER PEDICURE		CARRY OUT TOE NAILS VARNISHIN G	
	L1		L1		L1		L1		L1		L1

CU title: **MANICURE & PEDICURE SERVICES**

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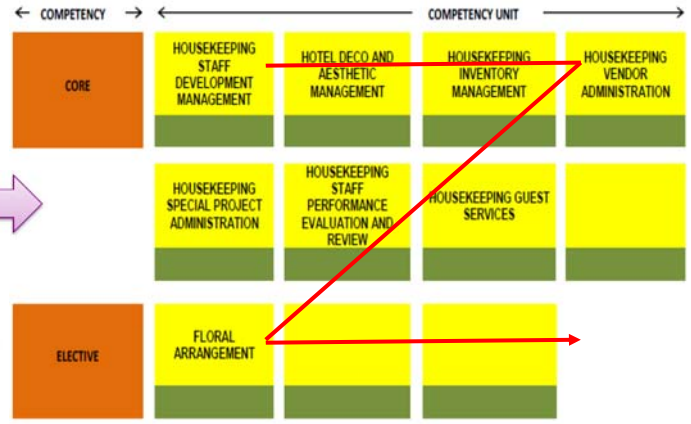
Examples : Sequencing the CU's from top left to bottom right in the CPC.

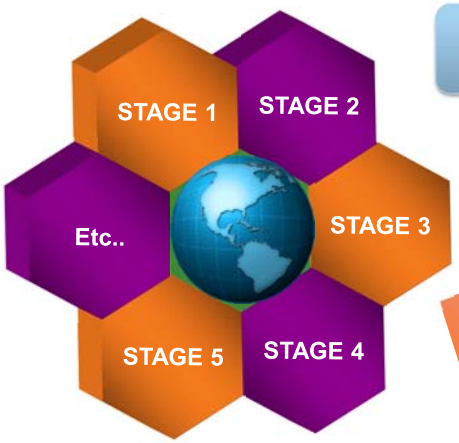
04

STAGES

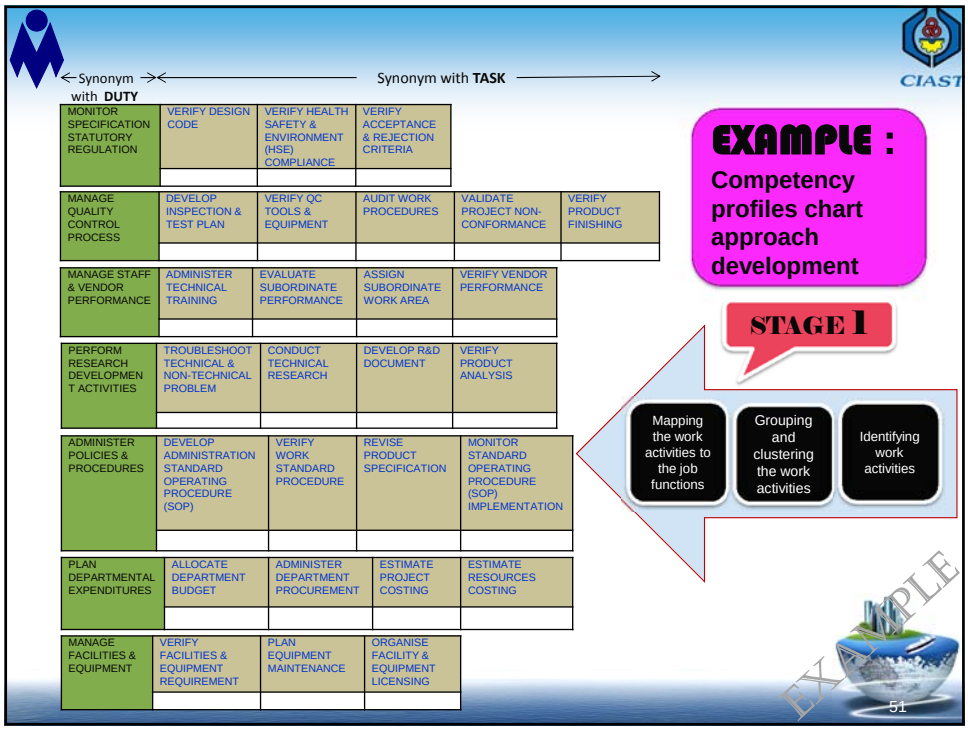
Determine the CU title. Naming of CU title should reflect the overall clustered duties, tasks, job functions and responsibilities within the competency unit.

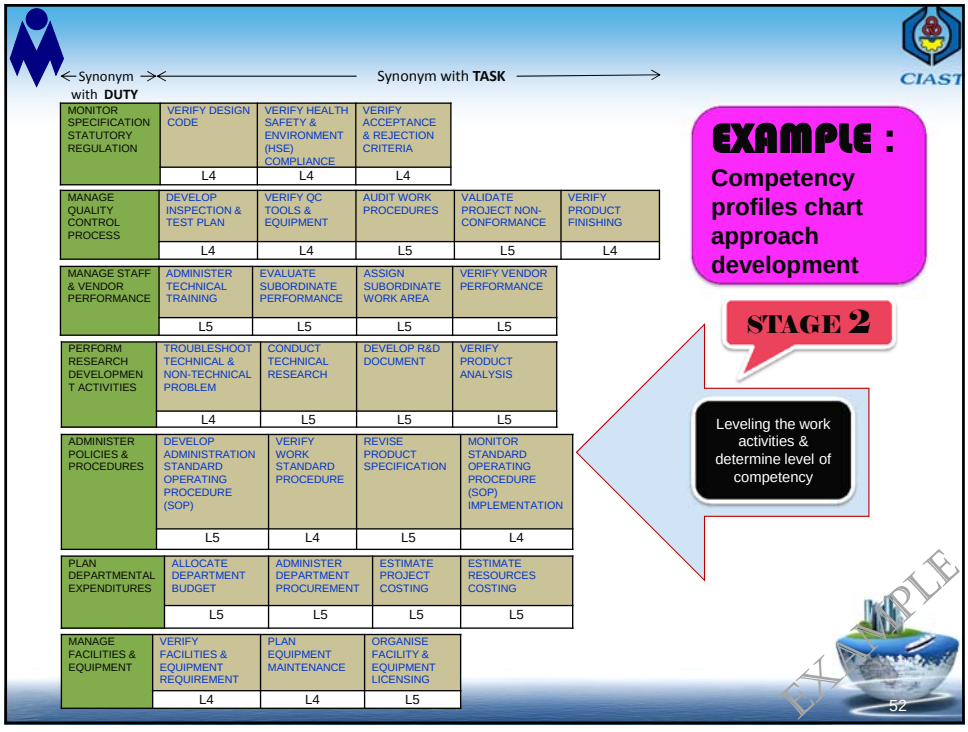


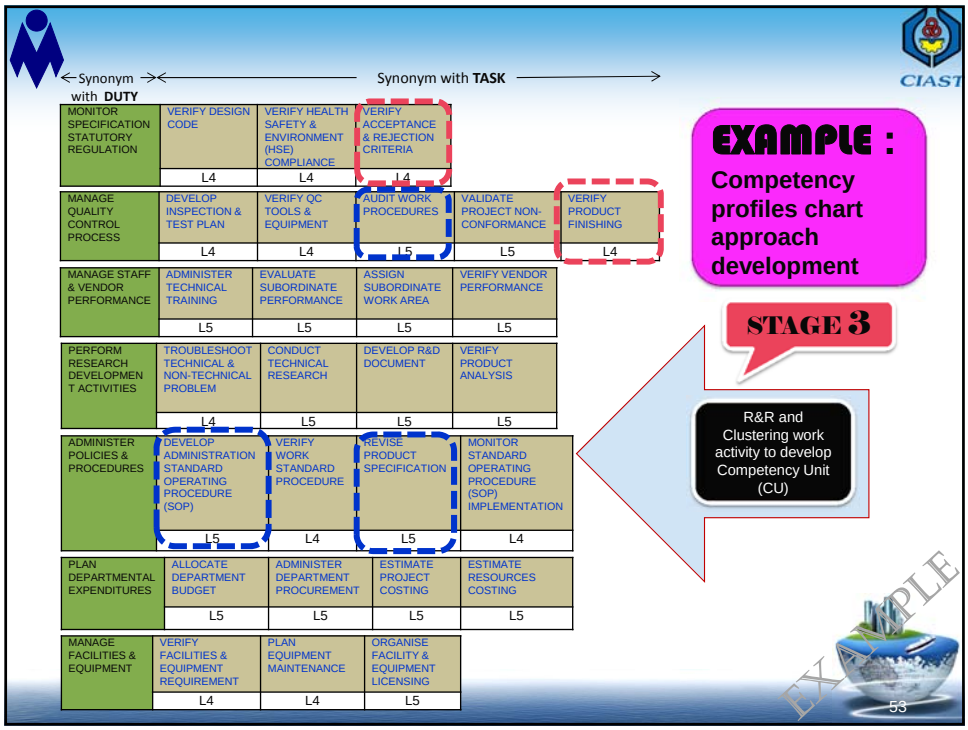
EXAMPLES: JOB ANALYSIS PROCESS APPROACH

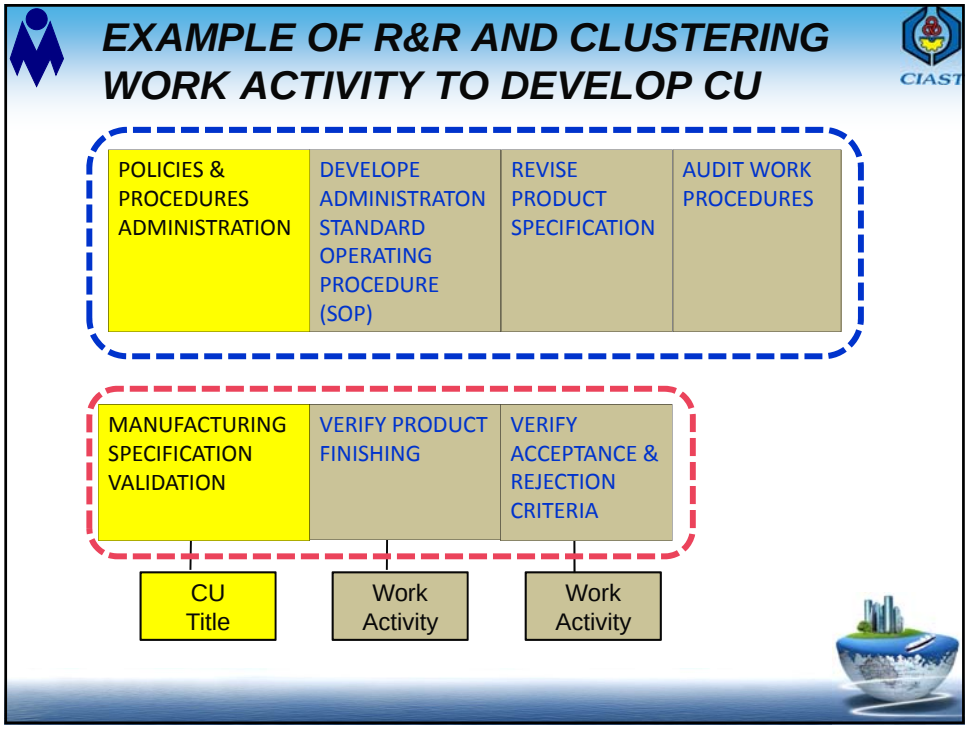


STYLE 2

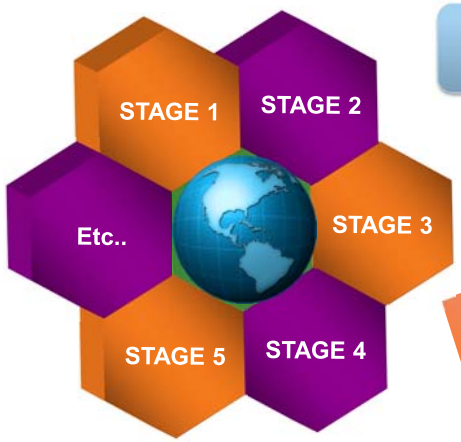

Synonym with DUTY
Synonym with TASK
CIAST
MONITOR SPECIFICATION STATUTORY REGULATION
VERIFY DESIGN CODE
VERIFY HEALTH SAFETY & ENVIRONMENT (HSE) COMPLIANCE
VERIFY ACCEPTANCE & REJECTION CRITERIA
MANAGE QUALITY CONTROL PROCESS
DEVELOP INSPECTION & TEST PLAN
VERIFY QC TOOLS & EQUIPMENT
AUDIT WORK PROCEDURES
VALIDATE PROJECT NON-CONFORMANCE
VERIFY PRODUCT FINISHING
MANAGE STAFF & VENDOR PERFORMANCE
ADMINISTER TECHNICAL TRAINING
EVALUATE SUBORDINATE PERFORMANCE
ASSIGN SUBORDINATE WORK AREA
VERIFY VENDOR PERFORMANCE
PERFORM RESEARCH DEVELOPMENT ACTIVITIES
TROUBLESHOOT TECHNICAL & NON-TECHNICAL PROBLEM
CONDUCT TECHNICAL RESEARCH
DEVELOP R&D DOCUMENT
VERIFY PRODUCT ANALYSIS
ADMINISTER POLICIES & PROCEDURES
DEVELOP ADMINISTRATION STANDARD OPERATING PROCEDURE (SOP)
VERIFY WORK STANDARD PROCEDURE
REVISE PRODUCT SPECIFICATION
MONITOR STANDARD OPERATING PROCEDURE (SOP) IMPLEMENTATION
PLAN DEPARTMENTAL EXPENDITURES
ALLOCATE DEPARTMENT BUDGET
ADMINISTER DEPARTMENT PROCUREMENT
ESTIMATE PROJECT COSTING
ESTIMATE RESOURCES COSTING
MANAGE FACILITIES & EQUIPMENT
VERIFY FACILITIES & EQUIPMENT REQUIREMENT
PLAN EQUIPMENT MAINTENANCE
ORGANISE FACILITY & EQUIPMENT LICENSING
EXAMPLE :
Competency profiles chart approach development
STAGE 1
Mapping the work activities to the job functions
Grouping and clustering the work activities
Identifying work activities
EXAMPLE
51


Synonym with DUTY
Synonym with TASK
CIAST
MONITOR SPECIFICATION STATUTORY REGULATION
VERIFY DESIGN CODE
VERIFY HEALTH SAFETY & ENVIRONMENT (HSE) COMPLIANCE
VERIFY ACCEPTANCE & REJECTION CRITERIA
L4 L4 L4
MANAGE QUALITY CONTROL PROCESS
DEVELOP INSPECTION & TEST PLAN
VERIFY QC TOOLS & EQUIPMENT
AUDIT WORK PROCEDURES
VALIDATE PROJECT NON-CONFORMANCE
VERIFY PRODUCT FINISHING
L4 L4 L5 L5 L4
MANAGE STAFF & VENDOR PERFORMANCE
ADMINISTER TECHNICAL TRAINING
EVALUATE SUBORDINATE PERFORMANCE
ASSIGN SUBORDINATE WORK AREA
VERIFY VENDOR PERFORMANCE
L5 L5 L5 L5
PERFORM RESEARCH DEVELOPMENT ACTIVITIES
TROUBLESHOOT TECHNICAL & NON-TECHNICAL PROBLEM
CONDUCT TECHNICAL RESEARCH
DEVELOP R&D DOCUMENT
VERIFY PRODUCT ANALYSIS
L4 L5 L5 L5
ADMINISTER POLICIES & PROCEDURES
DEVELOP ADMINISTRATION STANDARD OPERATING PROCEDURE (SOP)
VERIFY WORK STANDARD PROCEDURE
REVISE PRODUCT SPECIFICATION
MONITOR STANDARD OPERATING PROCEDURE (SOP) IMPLEMENTATION
L5 L4 L5 L4
PLAN DEPARTMENTAL EXPENDITURES
ALLOCATE DEPARTMENT BUDGET
ADMINISTER DEPARTMENT PROCUREMENT
ESTIMATE PROJECT COSTING
ESTIMATE RESOURCES COSTING
L5 L5 L5 L5
MANAGE FACILITIES & EQUIPMENT
VERIFY FACILITIES & EQUIPMENT REQUIREMENT
PLAN EQUIPMENT MAINTENANCE
ORGANISE FACILITY & EQUIPMENT LICENSING
L4 L4 L5
EXAMPLE :
Competency profiles chart approach development
STAGE 2
Leveling the work activities & determine level of competency
EXAMPLE
52


Synonym with DUTY
Synonym with TASK
MONITOR SPECIFICATION STATUTORY REGULATION
VERIFY DESIGN CODE
VERIFY HEALTH SAFETY & ENVIRONMENT (HSE) COMPLIANCE
VERIFY ACCEPTANCE & REJECTION CRITERIA
L4 L4 L4
MANAGE QUALITY CONTROL PROCESS
DEVELOP INSPECTION & TEST PLAN
VERIFY QC TOOLS & EQUIPMENT
AUDIT WORK PROCEDURES
VALIDATE PROJECT NON-CONFORMANCE
VERIFY PRODUCT FINISHING
L4 L4 L5 L5 L4
MANAGE STAFF & VENDOR PERFORMANCE
ADMINISTER TECHNICAL TRAINING
EVALUATE SUBORDINATE PERFORMANCE
ASSIGN SUBORDINATE WORK AREA
VERIFY VENDOR PERFORMANCE
L5 L5 L5 L5
PERFORM RESEARCH DEVELOPMENT ACTIVITIES
TROUBLESHOOT TECHNICAL & NON-TECHNICAL PROBLEM
CONDUCT TECHNICAL RESEARCH
DEVELOP R&D DOCUMENT
VERIFY PRODUCT ANALYSIS
L4 L5 L5 L5
ADMINISTER POLICIES & PROCEDURES
DEVELOP ADMINISTRATION STANDARD OPERATING PROCEDURE (SOP)
VERIFY WORK STANDARD PROCEDURE
REVISE PRODUCT SPECIFICATION
MONITOR STANDARD OPERATING PROCEDURE (SOP) IMPLEMENTATION
L5 L4 L5 L4
PLAN DEPARTMENTAL EXPENDITURES
ALLOCATE DEPARTMENT BUDGET
ADMINISTER DEPARTMENT PROCUREMENT
ESTIMATE PROJECT COSTING
ESTIMATE RESOURCES COSTING
L5 L5 L5 L5
MANAGE FACILITIES & EQUIPMENT
VERIFY FACILITIES & EQUIPMENT REQUIREMENT
PLAN EQUIPMENT MAINTENANCE
ORGANISE FACILITY & EQUIPMENT LICENSING
L4 L4 L5
EXAMPLE :
Competency profiles chart approach development
STAGE 3
R&R and Clustering work activity to develop Competency Unit (CU)
EXAMPLE
53


EXAMPLE OF R&R AND CLUSTERING WORK ACTIVITY TO DEVELOP CU
POLICIES & PROCEDURES ADMINISTRATION
DEVELOPE ADMINISTRATON STANDARD OPERATING PROCEDURE (SOP)
REVISE PRODUCT SPECIFICATION
AUDIT WORK PROCEDURES
MANUFACTURING SPECIFICATION VALIDATION
VERIFY PRODUCT FINISHING
VERIFY ACCEPTANCE & REJECTION CRITERIA
CU Title
Work Activity
Work Activity

EXAMPLES: JOB ANALYSIS PROCESS APPROACH

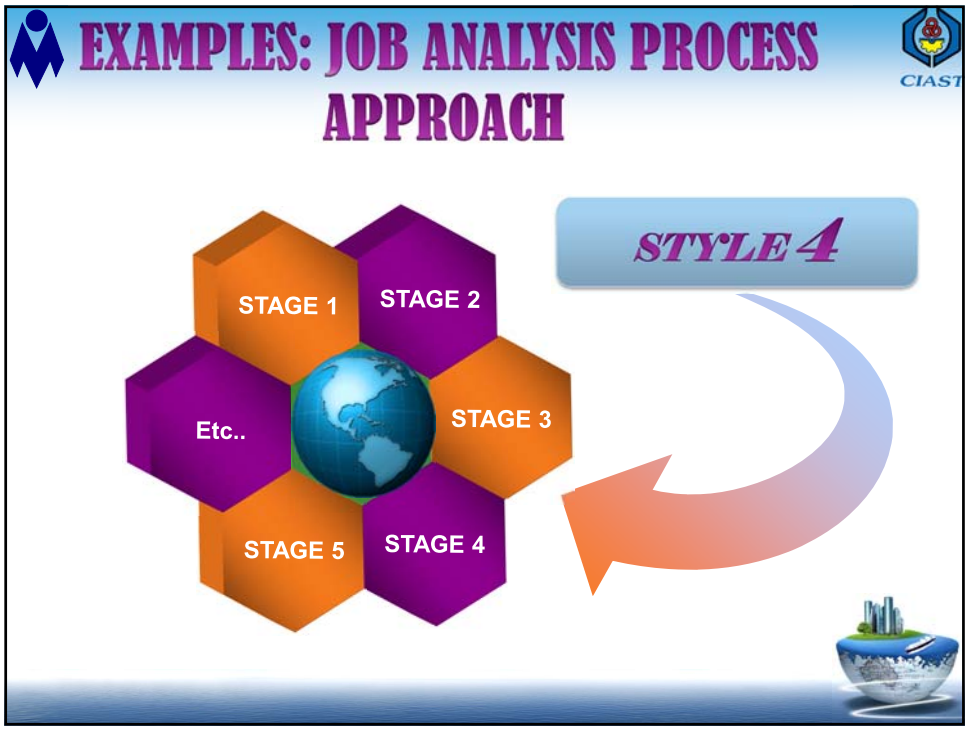


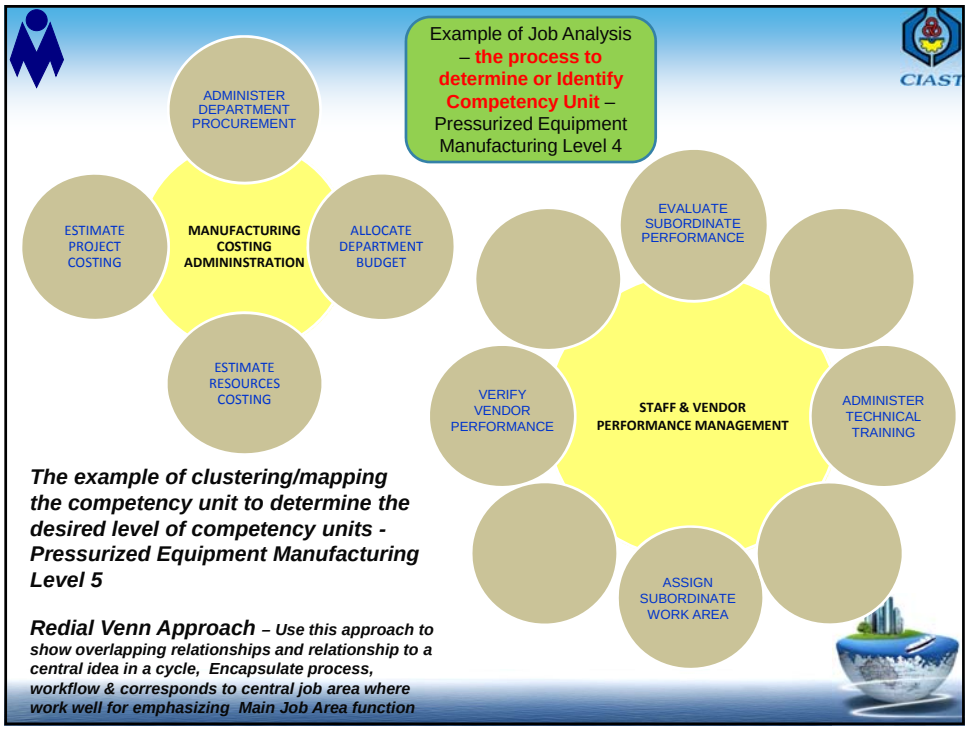
STYLE 3

POLICIES & PROCEDURES ADMINISTRATION	MANUFACTURING SPECIFICATION VALIDATION	MANUFACTURING MARKETING DEVELOPMENT	MANUFACTURING COSTING ADMINISTRATION	STAFF & VENDOR PERFORMANCE MANAGEMENT	MANUFACTURING RESEARCH & DEVELOPMENT
DEVELOPE ADMINISTRATON STANDARD OPERATING PROCEDURE (SOP)	VALIDATE PROJECT NON-PERFORMANCE	ORGANISE FACILITY & EQUIPMENT LICENSING	ALLOCATE DEPARTMENT BUDGET	EVALUATE SUBORDINATE PERFORMANCE	CONDUCT TECHNOLOGY RESEARCH
REVISE PPRODUCT SPECIFICATION	VERIFY ACCEPTANCE & REJECTION CRITERIA	CONDUCT MARKET SURVEY	ADMINISTER DEPARTMENT PROCUREMENT	VERIFY VENDOR PERFORMANCE	PERFORM PRODUCT DEVELOPMENT
AUDIT WORK PROCEDURES		MANAGE PROJECT DELIVERY	ESTIMATE PROJECT COSTING	ADMINISTER TECHNICAL TRAINING	VERIFY PRODUCT ANALYSIS
			ESTIMATE RESOURCES COSTING	ASSIGN SUBORDINATE WORK AREA	

The example of clustering/mapping the competency unit to determine the desired level of competency units – Pressurized Equipment Manufacturing Level 5

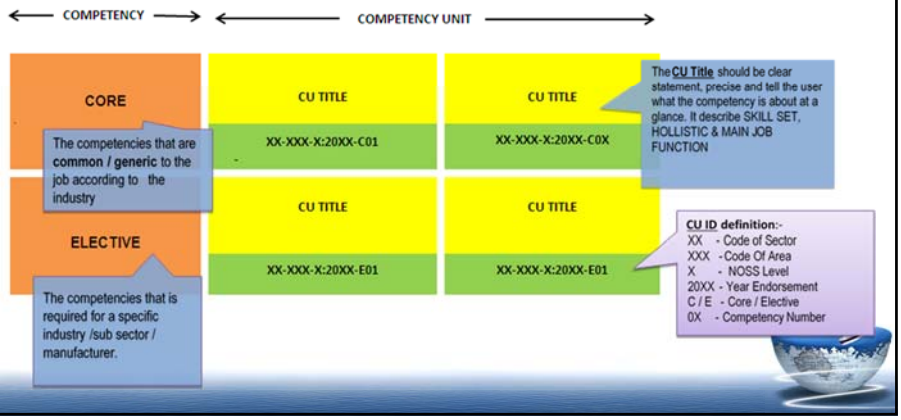
Group list Approach *– use this approach to show groups and sub-groups of information, or related area or sub area of job functions in a Main Function, encapsulate the process, workflow, corresponds to vertical job area where emphasizing hierarchical & multiple list of information*


EXAMPLES: JOB ANALYSIS PROCESS APPROACH
CIAST
STYLE 4
STAGE 1
STAGE 2
STAGE 3
STAGE 4
STAGE 5
Etc..


Example of Job Analysis – the process to determine or Identify Competency Unit – Pressurized Equipment Manufacturing Level 4
CIAST
ADMINISTER DEPARTMENT PROCUREMENT
ESTIMATE PROJECT COSTING
MANUFACTURING COSTING ADMININSTRATION
ALLOCATE DEPARTMENT BUDGET
ESTIMATE RESOURCES COSTING
EVALUATE SUBORDINATE PERFORMANCE
VERIFY VENDOR PERFORMANCE
STAFF & VENDOR PERFORMANCE MANAGEMENT
ADMINISTER TECHNICAL TRAINING
ASSIGN SUBORDINATE WORK AREA
The example of clustering/mapping the competency unit to determine the desired level of competency units - Pressurized Equipment Manufacturing Level 5
Redial Venn Approach – Use this approach to show overlapping relationships and relationship to a central idea in a cycle, Encapsulate process, workflow & corresponds to central job area where work well for emphasizing Main Job Area function

Competency Profile Chart Format

SECTOR	Insert related Industry Sector (Refer NOSS registry)		
SUB- SECTOR	Insert related industry sub sector reflect to main Industry Sector		
JOB AREA	The Job Area is a generic term to reflect the scope of work of a job function at a related level.		
NOSS TITLE	Title that reflect the competencies covered in particular job area		
JOB LEVEL	The level refers to the complexity of the Job Function in the job area as defined in the NOSS.	NOSS CODE	Identification code given for each NOSS Document



Competency Profile Analysis

The competency profile analysis is a **process to determine the Work Activities and Performance Criteria involved in each Competency Unit**. The scope, coverage and the delimitations of the competency will be summarized by the CU descriptor. This **analysis will be compiled into a Competency Profile**.

Competency Profile (FORMAT)

SECTOR	Insert related Industry Sector (Refer NOSS registry)		
SUB SECTOR	Insert related industry sub sector refled to main Industry Sector (Refer NOSS registry)		
JOB AREA	The Job Area is derived from the Job Title in the Occupational Structure. It is a generic term to reflect the scope of work of a job function at a related level.		
NOSS TITLE	Title that reflect the competencies covered in a particular job area		
JOB LEVEL	The level refers to the complexity of the Job Function in the job area as defined in the NOSS.	**NOSS CODE**	Identification code given for each NOSS Document

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
1. Insert Core CU Title [Refer CPC]	Insert CU ID -C01 [Refer CPC]			1.1

- The synopsis / abstract / summary of the Competency Unit. It is a concise description of what the competency unit covers; process; condition/ range; standards; licensing information and/or regulation; and/or manual; etc in order to carry out the competency successfully.
- The contents of CU Descriptor may describe by answering this question:-
  - What is the CU define / describe?
  - Who are related / involved with competencies?
  - Why important of CU ?
  - How the work activity done?
  - What the outcomes of CU?

Each activity represents a complete cycle of work to produce an outcome with its starting point and ending point which result in a product; service; or decision.
By completing all the work activities, a person is competent to perform all skill set in this CU

A statement describe how well he / she must perform the work activities with regard to process standard (step) and product standard (outcome) that meet the standard quality requirement

Competency Profile Format

CP:
MENYENARAIKAN KANDUNGAN STANDARD

KRITERIA PENCAPAIAN PEKERJA INDUSTRI

PECAHAN AKTIVITI UNIT KOMPETENSI

RUMUSAN UNIT KOMPETENSI

Sub Sector	ENERGY – SOLAR PHOTOVOLTAIC
Job Area	SOLAR INSTALLATION AND MAINTENANCE
Level	Two (2)

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
1. Site surveying	*SLR-XXX-01*	Site surveying is to identify the orientation of the solar panel and the location of the equipment according to the regulatory requirements, technical specification and client's requirements. The personnel who are competent in site surveying shall be able to assess possible problems that may occur for the solar photovoltaic installation and maintenance activities.	1.1 Identify site survey activities requirements 1.2 Identify site safety assessment criteria 2.1 Plan site survey activities 3.1 Carry out site survey activities 3.2 Carry out safety hazard identification 3.3 Carry out site safety assessment 4.1 Evaluate site survey result 4.2 Evaluate environmental hazard 5.1 Produce site survey report	1.1 Site survey activities checklist and manuals collected 1.2 Site safety assessment criteria listed out 2.1 Site situational condition studied 3.1 Site situational report produced 3.2 Environmental safety hazard noted 3.3 Site safety procedures adopted 4.1 Site safety procedures documented 4.2 Environmental safety procedures adopted 5.1 Site situational report confirmed
4 Controller installation	*SLR-XXX-02*	Controller installation activities are to install the controller components of the solar photovoltaic system according to the system design, regulatory requirements and technical	1.1 Identify controller installation manuals and specifications 1.2 Identify controller system components preparation checklist 2.1 Plan controller installation activities	1.1 Controller installation documents collected 1.2 Controller system components checked against specification 2.1 Tools, cables, trunking, materials

Developing Work Activities

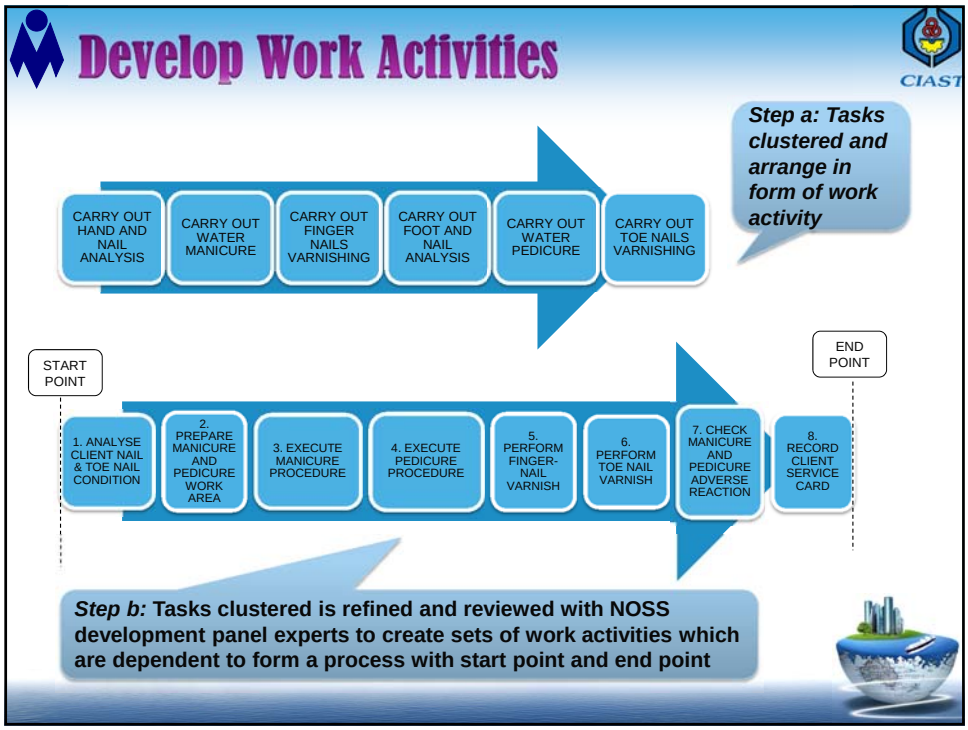
Work Activities

Should fulfil the following criteria:-

- Represents a **complete cycle of work activities** to produce an outcome with its **starting point and ending point**. The outcome maybe a service or product or decision.
- Each work activity is **observable and measurable** which can be determined by the performance criteria's.
- Work activities should **follow work process sequence**. In certain isolated cases, **functional activities** may be applied.
- Work activity statement consists of **Verb, Object and Qualifier.**

Cont…

Develop Work Activities



Explanation of Performance Criteria

Performance Criteria

Performance Criteria describes: ***"how do we know (ensure) when the work activities are performed well?"*** The Performance Criteria must reflect the ability of the competency being done in a measurable or observable method. This is to ensure it can be used for work performance evaluation.

Characteristic of Performance Criteria :-

- Are explicit parts of objectives
- Should be based on specific performance targets
- Should be objective (verifiable by outside sources)
- Should indicate degrees of accomplishment
- Should be agreed to by major actors involved in the programme – managers, supervisor, field personal

Develop Performance Criteria

- The statement of performance criteria is usually **written in passive voice**
- Performance criteria are evaluative statement which **specify what to be assessed and required levels of performance** – It is the **specification of the outcome** of the **activities, skills, knowledge, attitude, safety and environmental requirements** reflecting **evidence of competence performance**
- The statement of performance criteria maybe **highlighted with the critical terms and phrases or range** to reflect the boundaries or explanation of required competent performance
- The statement should **comprise of object and criteria**. In case of the criteria is not clear enough, the **condition** must be spell out.

Example : Developing Performance Criteria

Work activities	Performance Criteria
1. Analyze prescription	1. Customer/patient history and current eyewear are thoroughly reviewed 2. The prescription is properly and accurately evaluated relative to current eyewear and customer/patient history. 3. Prescription it reviewed for completeness. 4. The prescribing doctor is contacted to verify accuracy and irregularities as appropriate. 5. The limitations defined by the prescription are properly identified.
1. Collect data	1. Patient/customer record is obtained in a timely manner. 2. Third party provider is contacted and benefits are verified where appropriate. 3. Eligible benefits are determined for vision products and services. 4. Ophthalmic measurements are properly interpreted.

Example : To highlighted with object, criteria, condition and range in the PC Statement

Performance Criteria for CU Title of Foot Reflexology

1. **Assess client foot reflexology requirements**

1.1 Basic Health Information is ascertain in accordance to guidelines.

1.2 Indication and contraindication of foot reflexology distinguished in accordance with code of practice

object

1.3 Type of foot reflexology services determined in accordance with regulatory requirements.

1.4 Good cliental communication is applied

2. **Prepare foot reflexology work area**

condition

2.1 Foot reflexology work area determined in accordance with regulatory requirement in regard of emergency procedures

range

2.2 Workplace environment and safety, personal protective equipment for work activities appropriately selected.

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Explanation of CU Descriptor

CU Descriptor

It describes the **synopsis of the competency unit** on the **outcomes/ objectives; process; condition/ range; standards; and/or regulation; and/or manual; pre-requisite**; etc. in order to carry out the competency successfully

Develop CU Descriptor

- Clarify the title by describing the scope, coverage and delimitation of competency.
- The intent of the competency unit outline what is to be done in the workplace functions(holistic aspect)
- The descriptor provides more information on the content of the unit and the skill areas it addresses, including ant pre-requisite skills and licensing requirements

Cont…

Developing CU Descriptor

CIAST

CU Descriptor Contents	CU Descriptor Template	Example
1. CU Title (Extract from CU title)	The CU title describes the competency in [*CU Title*].	The CU title describes the competency in Reception Activities Handling.
2. CU Definition (Define whole work process of competency unit)	He or She [*CU Definition*]	He or She is the first person at the front office to greet, respond and direct a visitor, client or patient.
3. Process/ work activity (Extract from unit works activities)	The person who is competent in this CU shall be able to [*Process/ work activity*]	The person who is competent in this CU shall be able to carry out guest arrival activities, attend guest enquiries and needs, carry out bill settlement activities, carry out product sales activities, attend reservation needs, carry out filing arrangement and perform telephonist function to meet establishment requirement.
4. Objectives/ goal/ Standards; and/or regulation; and/or manual;	The outcome of this competency is to [*Objectives/ goal*] in accordance with [*Standards and/or regulation and/or manual*]	
5. CU training pre-requisite (If any)	The personnel who are to be trained for the competency must have [*CU training pre-requisite*].	The outcome of this competency is to provide excellent reception services to ensure guest satisfaction guaranteed, prompt action taken in accordance with company's policy rules and regulation.

Competency Profile (CP)

CIAST

Sub Sector	**FRONT OFFICE**
Job Area	**GUEST SERVICES OPERATION**
Level	**Three (3)**

Abstract from Occupational Area Analysis

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
1. Reception activities handling		The CU title describes the competency in Reception Activities Handling. He or She is the first person at the front office to greet, respond and direct a visitor, client or patient. The person who is competent in this CU shall be able to carry out guest arrival activities, attend guest enquiries and needs, carry out bill settlement activities, carry out product sales activities, attend reservation needs, carry out filing arrangement and perform telephonist function to meet establishment requirement. The outcome of this competency is to provide excellent reception services to ensure guest satisfaction guaranteed, prompt action taken.	1. Identify reception activities handling requirement 2. Prepare arrival activities 3. Carry out guest arrival activities 4. Attend guest enquiries and needs 5. Carry out bill settlement activities 6. Carry out product sales activities 7. Attend reservation needs 8. Carry out filing arrangement 9. Perform telephonist function 10. Evaluate reception activities handling effectivenes	1.1 Reception activities are handled with guest preferences and in accordance with company policies. 2.1 Arrival activities prepared in accordance with rooming list. 3.1 Guest arrival activities are handled, Malaysian value and culture, grooming are applied accordance with company policies. 4.1 Guest enquiries and needs answered in accordance with company policies. 5.1 Bill settlement activities are managed as per payment term in accordance with company policies. 6.1 Product sales activities explained to guest in accordance with company policies. 7.1 Reservation needs handled in accordance with company policies. 8.1 Filing a accorda es. 9.1 Teleph in accorda es. 10.1 Recept effectiv accorda es.

Abstract from Competency Profile Chart

Abstract from brainstorming process. This activity can be categorized by Function or Process

Abstraction outcome from each CU WA. The outcome of this PC can be elaborated by Service or Product or Decision

Performance VS Assessment

Performance criteria	Assessment criteria
Tells someone **how well he/she must perform** the work activities with regard to process criteria and product criteria that meet the **standard quality requirement**.	An assessment criterion is a list of critical **elements / range to be assessed** in order to **ensure expected competencies achieved**.
Example Work activity: Practice survival technique	
Timing and sequence of individual survival actions are appropriate to the prevailing circumstances and conditions of the emergency and minimize potential dangers and threats to other survivors	i. Survival actions met within timing and sequence to minimize potential dangers or threats to other survivors ii. Survival actions conducted appropriately to the prevailing circumstances and conditions of the emergency
Swims while wearing a life-jacket and floats without a life-jacket in accordance with established survival practice	i. Swam with a life-jacket on in compliance to established survival practice ii. Floats without a life-jacket in compliance to established survival practice

Performance to measure
Standard quality requirement

Criteria to assess
Competency to achieve

Definition of Curriculum of Competency Unit (CoCU)

CoCU is part of NOSS document which **describe the curriculum details and how the competencies must be delivered and assessed**. The development of the CoCU is a further breakdown of Competency Profiles. The CoCU shall be prepared in the standard format and layout specified.

Cont...

CoCU Format cont...

SECTOR	Insert related Industry Sector (Refer NOSS registry)
SUB SECTOR	Insert related industry sub sector reflect to main Industry Sector (Refer NOSS registry)
JOB AREA	The Job Area is a generic term to reflect the scope of work of a job function at a rel
NOSS TITLE	Title that reflect the competencies covered in particular job area
COMPETENCY UNIT TITLE	Title of each competency unit (CU) from Competency Profile Chart (CPC)
LEARNING OUTCOMES	Describe what the learn is expected to be able to:- Personnel Outcome Product Outcome How to do the work
PRE-REQUISITE (if appreciable)	Training Pre-Requisite Requirement

Training hour(s) is total hours which cover theory delivery, practical delivery, unstructured delivery hours and assessment hours for each particular CU to achieve a complete learning outcome as per industry requirement.

COMPETENCY UNIT ID	Insert CU IP	LEVEL	Insert NOSS Level	TRAINING DURATION	Total of CU training hours	SKILL CREDIT	The ratio for training hours to credit hours is 10 to 1 (10:1)

Work Activities	Related Knowledge	Related Skills	Attitude / Safety / Environmental	Training Hours	Delivery Mode	Assessment
			Attitude Safety Environmental	Related Knowledge Related Skill		

A related topic and information needed in order to perform the Work Activities.

The steps are required to complete the work process activities.

The selected mode to deliver training

An assessment criterion is a list of critical elements to be assessed in order to ensure expected competencies achieved including psychomotor, cognitive, and affective domain.

Cont...

CoCU Format

Refer **NCS Core Abilities - Z-009-1234 (Accreditation Program)**

Refer **Social Skill & Social Values (SLDN Program)**

Employability Skills

Core Abilities		Social Skills
01.01	Identify and gather information	1. Communication skills
02.01	Interpret and follow manuals, instructions and SOP's	2. Conceptual skills
02.04	Prepare brief reports and checklist using standard form	3. Interpersonal skills
03.05	Demonstrate safety skills	4. Multitasking and prioritizing
06.02	Comply with and follow chain of command	5. Self-discipline
06.01	Understand system	6. Teamwork
06.03	Identify and highlight problems	

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Schematic diagram	1:1
2. Block Diagram	1:1
3. Measuring and Test Instruments	1:1
4. Components/Parts Specification	1:1
5. Equipment Data Book	1:2

I. **A list of critical instructional tools, equipment, materials required to complete a particular competency unit successfully.**
II. **It must not reflect to any brand/vendor in particular**

1 (TEM) : XX trainee
1 : 25 (maximum)
Consumable : as required

REFERENCES

1. German Solar Energy Society (DGS), Earthscan Publications Ltd. (January 2005), Planning and Installing Photovoltaic Systems: A Guide for Installers, Architects and Engineers, ISBN-13: 978-1844071319
2. Solar Energy International (SEI), New Society Publishers; 1 edition (September 1, 2004)Photovoltaics: Design and Installation Manual, ISBN-13: 978-0865715202
3. Martin A. Green, Springer (December 21, 2005), Third Generation Photovoltaics: Advanced Solar Energy Conversion (Springer Series in Photonics), ISBN-13: 978-3540265627
4. Richard J. Komp, Aatec Publications; 3 Sub edition (June 1995), Practical Photovoltaics: Electricity from Solar Cells, ISBN-13: 978-0937948118
5. Falk Antony, Earthscan Publications Ltd.; illustrated edition edition (June 2007), Photovoltaics for Professionals: Solar Electric Systems Marketing, Design and Installation, ISBN-13: 978-1844074617
6. James P. Dunlop and In partnership with NJATC, Amer Technical Pub (January 30, 2007), Photovoltaic Systems, ISBN-13: 978-0826912879

Refer Noss Development Guideline

Develop Curriculum of Competency Unit (CoCU)

- Based on the information in the CP. CoCU will detail out work activities into Related Knowledge; Related Skills; Attitude/ Safety/ Environmental; Delivery Mode; Training Duration; Assessment Criteria; Tools, Equipment and Material (TEM); References; also related Core Abilities and Social Skills
- During development of CoCU, ensure exhaustive analysis has been done in order to ensure main elements of Related Knowledge, Related Skills, Attitude/ Safety/ Environmental are covered
- CoCU will standardise curriculum throughout different training organisations accredited by DSD. It will **<u>further guide the development of Written Instructional Material (WIM) and Assessment Material</u>**

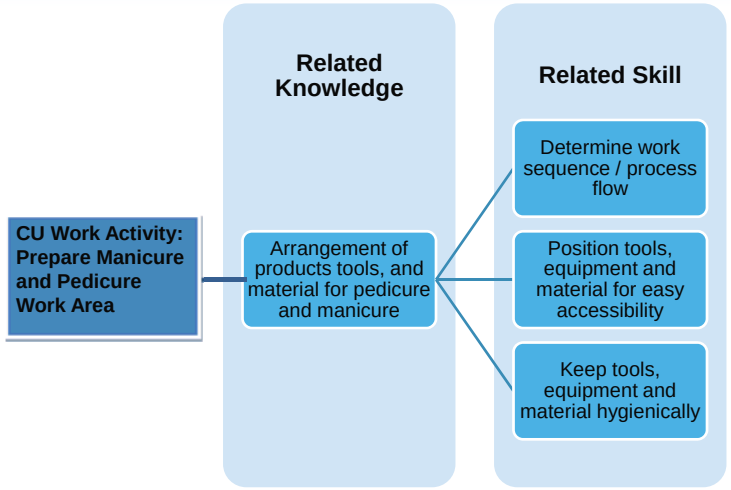
Related Skills

Related Skills refer to the abilities of workers which are required to complete the Work activities ***(what skills (competency) do you need to perform the Work Activities?)***

Related Knowledge

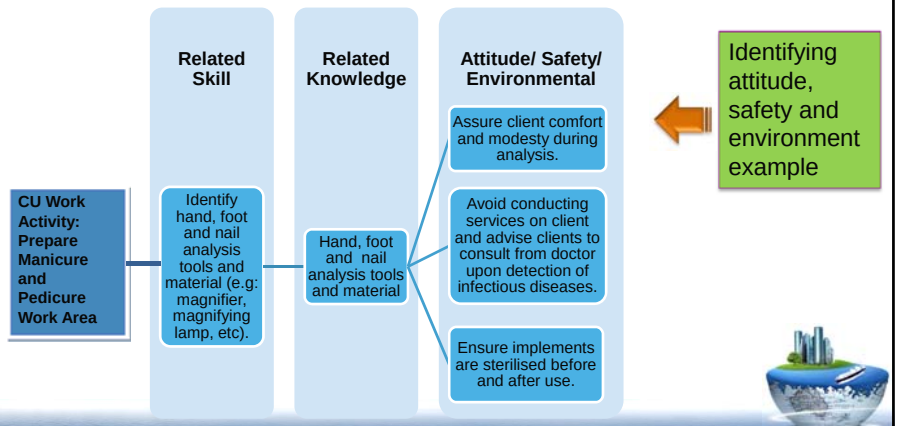
Related Knowledge refer to the information that is needed to perform the Work Activities ***(what skill do you need to know in order to perform the Work activities?)***. Each related Knowledge; there may be more than one related skill.

EXAMPLE: Identifying related skills and related knowledge



Develop Attitude/Safety

- In identifying attitude, safety and environmental, it is advise to look into each related knowledge and related skill as related to aspects of attitude, safety and environment which involve in performing the work



Attitude

Attitude involves how people react to certain situation and how they behave in general

EXAMPLE :

- Concern on environmental friendly issues
- Keep the documents neat and tidy
- Ensure components specification is according to required specification
- Meticulous in preparing inverter installation planning
- Wear appropriate PPE
- Handle equipment with care

Safety

Safety includes behaviour and safety precautions to be complied with when performing the CU

EXAMPLE :

- Prevent from electrical shock during testing
- Avoid wrong selection of tools and equipment to carry out mounting and cabling activities
- Handle hazardous materials with caution

Learning Outcome

- Describes; *what students are able to demonstrate in term of knowledge, skills and values upon completion of a course, a span of several courses, or a program*.
- Clear articulation of learning outcomes serve as the foundation to evaluate the effectiveness of the teaching and learning process.

Develop Learning Outcome

The person who is competent in this CU shall be able to provide excellent reception services to ensure guest satisfaction guaranteed, prompt action taken. **Upon completion of this competency unit, trainees will be able to:-**

- Identify reception activities handling requirement
- Prepare arrival activities
- Carry out guest arrival activities
- Attend guest enquiries and needs
- Carry out bill settlement activities
- Attend reservation needs
- Carry out filing arrangement
- Perform telephonist function
- Evaluate reception activities handling effectiveness
- Produce reception activities report

Statement Outcome of CU Descriptor

Consistent wording of LO

Summary of CU work activities

Training Hours For NOSS

- Time taken to perform activities and complete learning outcome by guided training
- Clustered all assessment criteria to determine the required training hours and delivery mode of the unit of competency
- Its ratio should be a breakdown of 30~50 (T) : 70~50 (P). As a guide, the total training hours for NOSS (refer SKKM Guideline)

References: Noss Development Guideline 2nd. Edition, 2013

Training Hours for NOSS

LEVEL	TOTAL TRAINING PROGRAM HOURS
Level 1	400 - 600
Level 2	400 – 600
Level 3	800 - 1200
Level 4	800 - 1200 (not including OJT)
Level 5	1200 - 1800 (not including OJT)
For NOSS which starts at Level 2	800 - 1200
For NOSS which Starts at Level 3	1600 - 2400
For NOSS which starts at Level 4	2400 – 3600 (not including OJT)
For NOSS which starts at Level 5	3600 - 5400 (not including OJT)

References: Noss Development Guideline 2nd. Edition, 2013

Training Duration

- Minimum training period to achieve learning outcome
- Sum of training hours in 1 CU

NOTIONAL HOURS

Definition: Notional hours are the total hours taken by a average individual performance in order to achieve a complete learning outcomes;

Total hours include guided activities or face to face (contact hours), personal learning and assessment activities

1 Credit = 10 Notional Hours

References: Sistem Kredit dan Kemahiran Malaysia

Panduan Kelayakan dan Kredit

Skills credit can only be given after the learning outcomes achieved. One skill credit can bring one qualifications. Here is the cumulative amount of the credit for the level.

- Sijil tahap 1 : Minimum 40 kredit
- Sijil tahap 2 : Minimum 80 kredit (min tahap 1 & 2)
- Sijil tahap 3 : Minimum 160 kredit (min tahap 1,2 & 3)
- Sijil tahap 4 : Minimum 240 kredit (min tahap 1,2,3 & 4)
- Sijil tahap 5 : Minimum 360 kredit (min tahap 1,2,3,4 & 5)

References: Sistem Kredit dan Kemahiran Malaysia

Assessment Criteria

- **All the related knowledge, applied skills, attitude, safety and environmental requirements of the expectation should be assessed;**
- List of critical elements/range to be assessed to achieve work activities
- Measure the outcome of the learning process into three (3) learning domains defined by Bloom's Taxonomy ; The assessment criterion facilitates, the curriculum delivery strategies and assessment procedures
- The statement should comprise of **object outcome** and **criteria.** In case of the criteria is not clear enough, the **condition** must be spell out.
- Object + Qualifier + Past tense verb (an action,an event, or condition)
- Can use preposition – is, are, of

Delivery Mode

The selected mode to deliver training;

- Related knowledge such as :-
  Lecture, discussion, shop talk, question & answer, seminar and case study

- Related skills such as :-
  Demonstration, observation, simulation, role play and project

Lists detail of training delivery modes; refer to
NOSS DEVELOPMENT GUIDELINE (NDG) - Index 1

Knowledge Delivery Mode

1	Lecture	In-person lecture to a large group of learners (>10pax) on a particular topic with limited interaction and practice
2	Group discussion	Instructor introduces a topic for discussion to a small group of learners. Learner participates by exchanging views on the topic and report individually or as a group to instructor.
3	E-learning, self-paced	Training delivered electronically (e.g., computer-based via the Internet or with CD-ROMs) in which learner sets own learning pace.
4	E-learning, facilitated	Instruction delivered electronically with an instructor or facilitator who sets the pace and/or offers interaction (e.g., webcasts or scheduled Internet instruction).
5	Case study or Problem based learning (PBL)	A specific problem is specified by the course instructor. Students work individually or in teams independent of instructor by over a period of time to develop solutions to the problem in form of a report.
6	Self-paced learning, non-electronic	Learner follows a course of study, setting own learning pace (e.g., with printed materials such as books or manuals, not via the Internet).
7	One-on-one tutorial	Instructor provides individual lecture in form of instruction to one learner on a particular topic with personal guidance.
8	Shop talk	The instructor delivers conversation to a small group of learners (4-10 pax) about matters on a particular topic with limited interaction and practice.
9	Seminar	In-person lecture to a large group of learners (>10pax) on a particular topic with limited interaction but without practice.

Skills Delivery Mode

1	Demonstration	In-person demonstration on a particular topic with limited interaction and practice
2	Simulation	Training is conducted using a virtual or imitation of a real-life process, usually via a computer or other technological device, in order to provide a lifelike experience, with or without guidance of the instructor.
3	Project	Learners are given project assignments to practice. They have a great deal of control of the project they will work on and what they will do in the project. The project may or may not address a specific problem.
4	Scenario based training (SBT)	The instructor creates a real life environment with specific scenario for the learners to train to achieve specific training objectives. Uses a highly structured script of real world experiences. Different scenarios of risk and contingency are introduced to rationalize decisions and actions.
5	On job training (OJT)	Employee training at the place of work while he or she is doing the actual job. Usually a professional trainer (or sometimes an experienced employee) serves as the course instructor using hands-on training often supported by formal classroom training.
6	Role play	Role-playing may also refer to role training where people rehearse situations in preparation for a future performance and to improve their abilities within a role.
7	Coaching	Coaching is helping to identify the skills and capabilities that are within the learner, and enabling them to use them to the best of their ability.
8	Observation	The instructor shows to the audience on a particular activity. The learner is constricted to limited interaction to instructor.
9	Mentoring	Mentoring is showing people how the people who are really good at doing something do it.

Core Abilities

- Common abilities that trainees must possess to be prepared for the working environment
- Obtain core abilities profile from NCS Core Abilities
- State the required core abilities to perform each CoCU and remain the existing code numbers.

EXAMPLE :

01.01 Identify and gather information
02.01 Interpret and follow manuals, instructions and SOP's
03.05 Demonstrate safety skills

- Level 1 ~ Level 4 only

Lists detail of Core Ability; refer to
NOSS DEVELOPMENT GUIDELINE (NDG) - Index 2

Social Skills

- Any skills facilitating interaction and communication with others
- Obtain social skills profile from DSD and determine the required social rules and relations are created, communicated, and changed in verbal and nonverbal ways

EXAMPLE :

Communication skills
Interpersonal skills
Teamwork

Tools, Equipment and Materials (TEM)

- List of major and compulsory tools, equipments and materials required to complete a particular CU successfully
- NOT reflect to any brand/vendor in particular
- State the required ratio (Items : Trainees)

EXAMPLE :

Computer	1:1
Printer	1:20

References

- Determined during CoCU development
- Identified and selected based on credibility of the source to be used later in training.

No	Reference criteria	Guide
1	Prominent reference for related industry	1. Renown source of reference among industry practitioners or trainers (ex: published manufacturer's operating standard) 2. Established references recognized by industry regulators or statutory bodies (ex: publish acts) 3. Commendable source of reference mandated to industry from reputable international industry organisation (ex: ASME IX, BS)
2	Must be available in market	1. Available internationally or within Malaysia market 2. Available in printed hardcopy or softcopy 3. Accessible be obtain or purchased
3	Latest version	1. The newest version of the reference in market.

Cont...

References List

List of references are such as:-

i) Books;
ii) Manuals;
iii) Journal;
iv) Standard Operating Procedures
v) Web site
vi) Audio Visual Materials
vii) Acts, and Statutory Regulations

Cont...

References Writing Format

Writing hardcopy references:

Use American Psychological Association (APA) Format:

Author's last name, first initial,(Publication date /year), *Book title*, Edition Number(Publish Number). City of Publication and Publishing Company

EXAMPLE :

Martin A. Green, Springer (December 21, 2005), Third Generation. Photovoltaics*: Advanced Solar Energy Convention (Springer Series in Photonics) 3 (3)*, ISBN: 13-978-3540265627

Cont...

References Writing Format

Writing electronic references:

APA Format:

Author's last name, first initial. Publication date. Topic headline. *Book title* Edition Number (Publish Number): Range of reference page. Website address without underline. [Date accessed: Time accessed].

- Internet:

EXAMPLE :

Clark, J.K. 1999. Humidity sensor. *Journal of Physics* 2(2): 9-13 http://www.cit.edu/phys/sensor.html [20 Julai 1999: 20.06pm].

Cont...

References Writing Format

- Journal:

EXAMPLE :

Kawasaki, J.L. 1996. Computer administered surveys in extension. *Journal of Extension* 33(3): 204-210. http://www.apa.orgljoumals/webref.html [18 November 1999: 09.11am].

Curriculum of Competency Unit (CoCU)

Sub Sector						
Job Area						
Competency Unit Title						
Learning Outcome						
Competency Unit ID		**Level**		**Training Duration**		**Credit Hours**	

Work Activities	Related Knowledge	Related Skills	Attitude / Safety / Environmental	Training Hours	Delivery Mode	Assessment Criteria
1.	i. ii.					
		i. ii.	*Attitude :* - *Safety :* - *Environmental :* -			

Employability Skills			
Core Ability		Social Skills	
Tools, Equipment and Materia			
Items		Ratio(item trainees)	
1. 2.			
References			
1.			

Extract from CPC 1

Extract from CP 2

3 Extract from NCS Core Abilities

4 Extract from Social skills

Curriculum of Competency Unit (CoCU)

Sub Sector							
Job Area							
Competency Unit Title							
Learning Outcome							
Competency Unit ID		**Level**		**Training Duration**		**Credit Hours**	

Work Activities	Related Knowledge	RelatedSkills	Attitude / Safety / Environmental	Training Hours	Delivery Mode	Assessment Criteria
1.	i. ii.			5	6	4
		i. ii.	*Attitude :* - *Safety :* - *Environmental :* -			

1. Copy related skills
2. Paste onto related knowledge
3. Delete verb

2

1. Copy PC from CP
2. List down skill required

1

3

Employability Skills	
Core Ability	Social Skills

Tools, Equipment and Materials(TEM)	
Items	Ratio(item trainees)
1. 2.	

References
1.

Training Hour Summary Format

SUMMARY OF TRAINING DURATION FOR :NOSS TITLE- (-LEVEL-)

NO. ID	COMPETENCY UNIT TITLE	WORK ACTIVITIES	RELATED KNOWLEDGE (A)	RELATED SKILLS (B)	HOURS (A) + (B)	TOTAL (HRS)
Insert CU ID	Title of each CU from CPC					Total of training hours for CU
		TOTAL HOURS (Core Competencies)	0	0	0	0
		TOTAL HOURS (+ Elective Competency)	0	0	0	0

Standard Practice

CIAST

- The Standard Practice Introduction should include LITERATURE REVIEW and JUSTIFICATION OF THE NOSS
- Others elements of the Standard Practice can be abstract from the Occupational Structure, Occupational Area Analysis, Job Analysis, Competency Profile Analysis
- It is to be reviewed and refined during validation of contents

Standard Practice Development

The Standard Practice (SP) is an essential part before the standard can be run though the first phase of proofreading and validation. This is because NOSS consist of SP, CPC and CP to form the complete occupational Standard. The main content list of SP content are as follows:

No.	Sub titles	Contents
1	Introduction	1.1 Occupation overview - Regulatory body requirements (if any) - Occupational outlook - Job requirement (if any) - Other relevant information
2	Occupational Structure	2.1 Occupational Structure 2.2 Occupational Area Structure 2.3 NOSS Occupational Area Structure and level justification
3	Definition of competency level	3.1 Competency level as defined by DSD (refer DSD to update as necessary) (Please refer **NDG 1st. Edition, 2012: Index 3** for format and definition)
4	Award of Certificate	4.1 Certification requirements award
5	Occupational Competencies	5.1 List of core competencies 5.2 List of elective competencies
6	Work Conditions	1. Working environment 2. Issues related to area of work (such as safety, environment)

References: Noss Development Guideline 2nd. Edition, 2013. Please refer for main list of SP

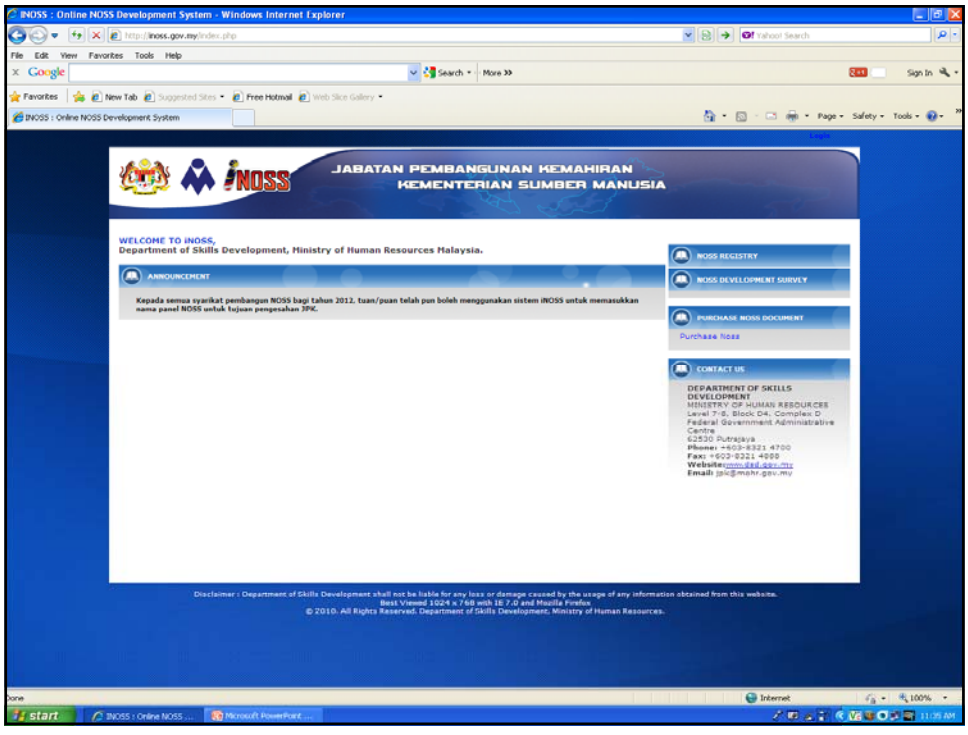
Cont...

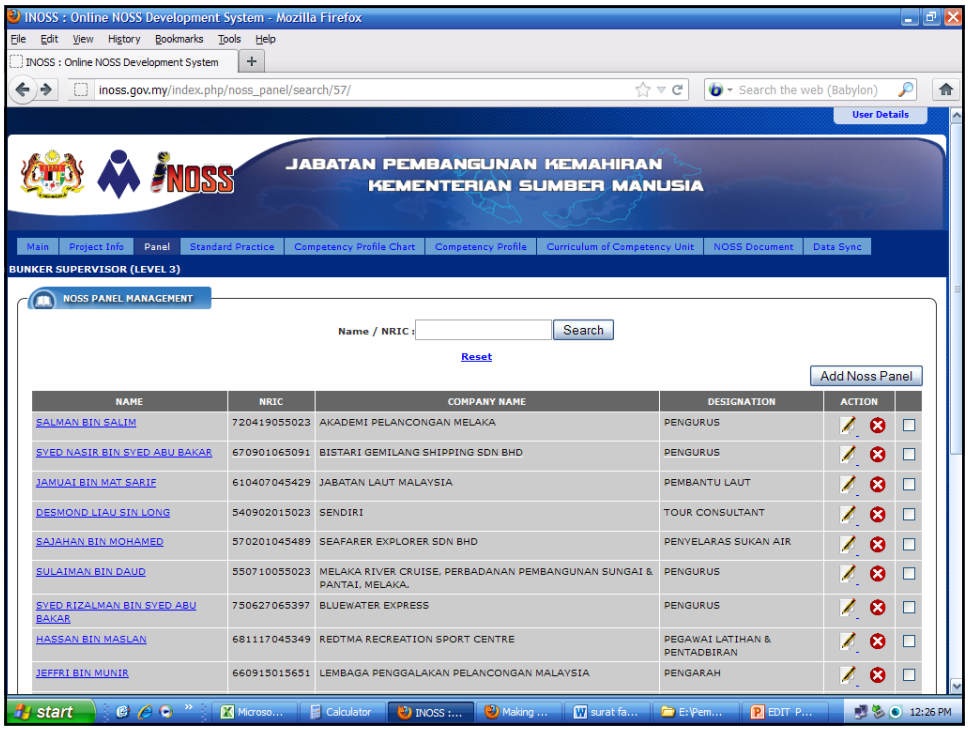
Standard Practice Development

No.	Sub titles	Contents
7	Employment prospects	Malaysian market 7.1 Growth of sector/ sub sector/ area/ sub area in Malaysia 7.2 Employment opportunities in Malaysia 7.3 List of industry sector employers 7.4 Codes, standards and practices in area/ sub area in Malaysia International market (optional) 7.5 Growth of sector/ sub sector/ area/ sub area internationally 7.6 Employment opportunities internationally 7.7 Codes, standards and practices in area/ sub area internationally
8	Career Advancement	8.1 Industrial recognition/ professional qualification 8.2 Other prominent qualification recognised (in Malaysia or international) 8.3 Types of occupation for career advancement 8.4 Related industries
9	Sources of Additional Information	9.1 Local organisation (excluding DSD) 9.2 International organisation
10	Acknowledgement	10.1 List of organisation acknowledge 10.2 List of individual acknowledge
11	NOSS Development Committee Members	11.1 List of NOSS development panel expert, program manager, facilitator and secretariat

References: Noss Development Guideline 2nd. Edition, 2013. Please refer for main list of SP

iNOSS Online Application

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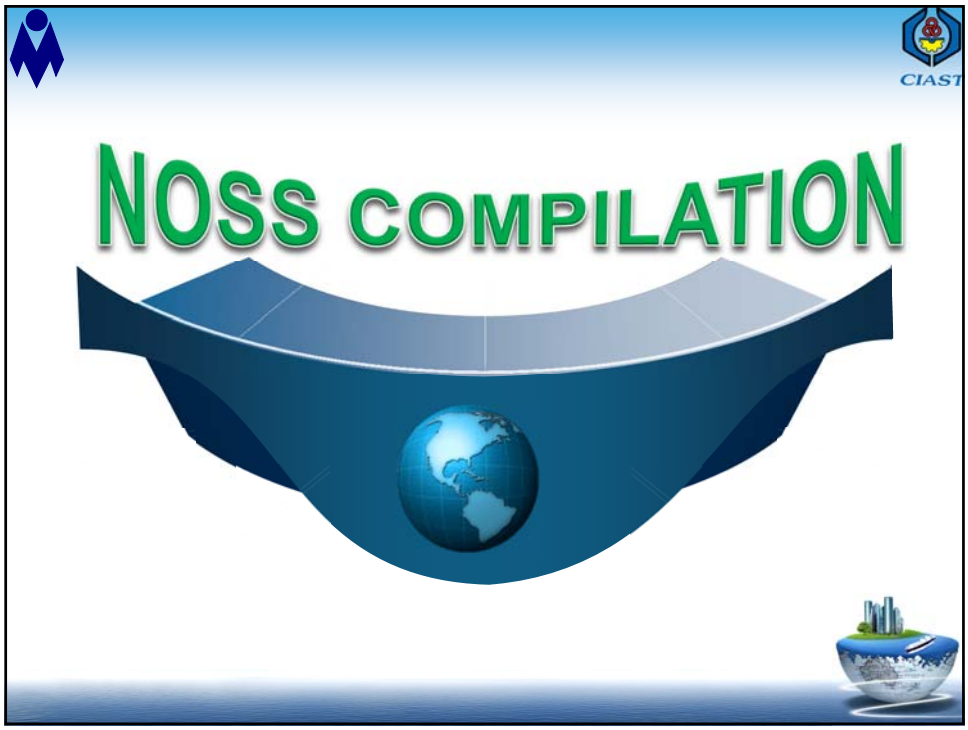
File Edit View History Bookmarks Tools Help
INOSS : Online NOSS Development System
inoss.gov.my/index.php/noss_panel/search/57/
Search the web (Babylon)
User Details
JABATAN PEMBANGUNAN KEMAHIRAN
KEMENTERIAN SUMBER MANUSIA
Main Project Info Panel Standard Practice Competency Profile Chart Competency Profile Curriculum of Competency Unit NOSS Document Data Sync
BUNKER SUPERVISOR (LEVEL 3)
NOSS PANEL MANAGEMENT
Name / NRIC : Search
Reset
Add Noss Panel
NAME NRIC COMPANY NAME DESIGNATION ACTION
SALMAN BIN SALIM 720419055023 AKADEMI PELANCONGAN MELAKA PENGURUS
SYED NASIR BIN SYED ABU BAKAR 670901065091 BISTARI GEMILANG SHIPPING SDN BHD PENGURUS
JAMUAI BIN MAT SARIF 610407045429 JABATAN LAUT MALAYSIA PEMBANTU LAUT
DESMOND LIAU SIN LONG 540902015023 SENDIRI TOUR CONSULTANT
SAJAHAN BIN MOHAMED 570201045489 SEAFARER EXPLORER SDN BHD PENYELARAS SUKAN AIR
SULAIMAN BIN DAUD 550710055023 MELAKA RIVER CRUISE, PERBADANAN PEMBANGUNAN SUNGAI & PANTAI, MELAKA. PENGURUS
SYED RIZALMAN BIN SYED ABU BAKAR 750627065397 BLUEWATER EXPRESS PENGURUS
HASSAN BIN MASLAN 681117045349 REDTMA RECREATION SPORT CENTRE PEGAWAI LATIHAN & PENTADBIRAN
JEFFRI BIN MUNIR 660915015651 LEMBAGA PENGGALAKAN PELANCONGAN MALAYSIA PENGARAH
start
12:26 PM

CIAST
Thank You

CIAST
STAGE 3
NOSS Validation
Compilation
Validation
Presentation


CIAST
NOSS COMPILATION

STAGE 3 : NOSS COMPILATION

- Ensure formatting of the NOSS documents compilation procedure followed
- Check service agreement or contract of NOSS development to ensure terms and condition adhered
- Use proper resources and appropriately compiled all documents
- Apply facilitation skills

NOSS VALIDATION

STAGE 3 : NOSS VALIDATION

- Ensure contents of NOSS document proofread and get consent of the Committee Members
- Ensure all element, amendment and contents recorded
- Apply facilitation skills

STAGE 3 : NOSS VALIDATION AND PROOF READ

✓ *Proofreading process*

- *check use of verbs*
- *check spelling*
- *check duplication of verbs*
- *check consistency of terminology*
- *check proper nouns (ex: Standard Operating Procedure)*
- *any terminology not understood or commonly used*
- *tasks statements that are too global in nature or too specific*
- *tasks statements which do not start with measurable, transitive verbs*
- *new tasks that were missed in the original session*
- *consistency of font type, style and size according to format*

STAGE 3 : NOSS EXTERNAL VALIDATION

- Circular the proofread copy to industry to get acknowledgement
- Compile all necessary acknowledgement or comments from the industry
- Use proper dissemination medium to get external validation and acknowledgement
- Apply facilitation skills

NOSS PRESENTATION

STAGE 3 : NOSS PRESENTATION PREPARATION

- Ensure service agreement or engagement of Panel members for presentation provided
- Prepare all relevant presentation resources
- Apply facilitation skills
- Use the required presentation kit
- Endorsement procedures followed

STAGE 4

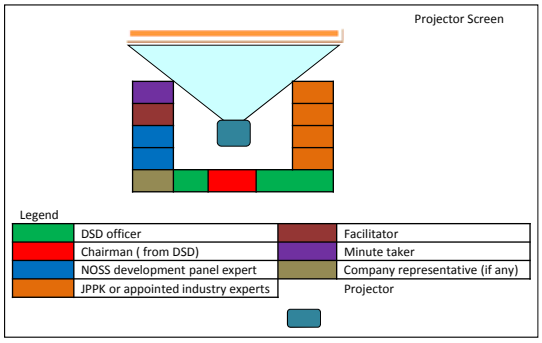
NOSS Approval → Practitioners → MPKK → Documentation

PRACTITIONERS VALIDATION

STAGE 4 : NOSS APPROVAL

Standard and Curriculum Technical Evaluation Committee (TEC)

The committee is represented by related industrial experts throughout the country. On the other preference, validation can be extended by circulating the aforesaid NOSS to related industry nationwide for feedback



TEC Validation Session arrangement

STAGE 4 : MPKK APPROVAL

The verified and validated drafted National Occupational Skills Standard (NOSS) must be presented to the *Majlis Pembangunan Kemahiran Kebangsaan (MPKK)* for approval. The approved document then will become a NOSS for the respective occupational area.

NOSS DOCUMENTATION

STANDARD NOSS DOCUMENTATION

Standard on NOSS writing (HARDCOVER)
Font : Arial (Capital letter)
Size : 12
Colour : Silver

Standard on NOSS writing (CONTENT)
Font : Arial
Size : 11

Cover page for draf NOSS

Cover page for MPKK

Cover page for Final Document

TERIMA KASIH
AUSTRALIA
OCEANIA