



**OCCUPATIONAL  
QUALIFICATIONS  
DEVELOPMENT FACILITATOR  
MANUAL**

**AUGUST 2014**

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**german  
cooperation**

DEUTSCHE ZUSAMMENARBEIT

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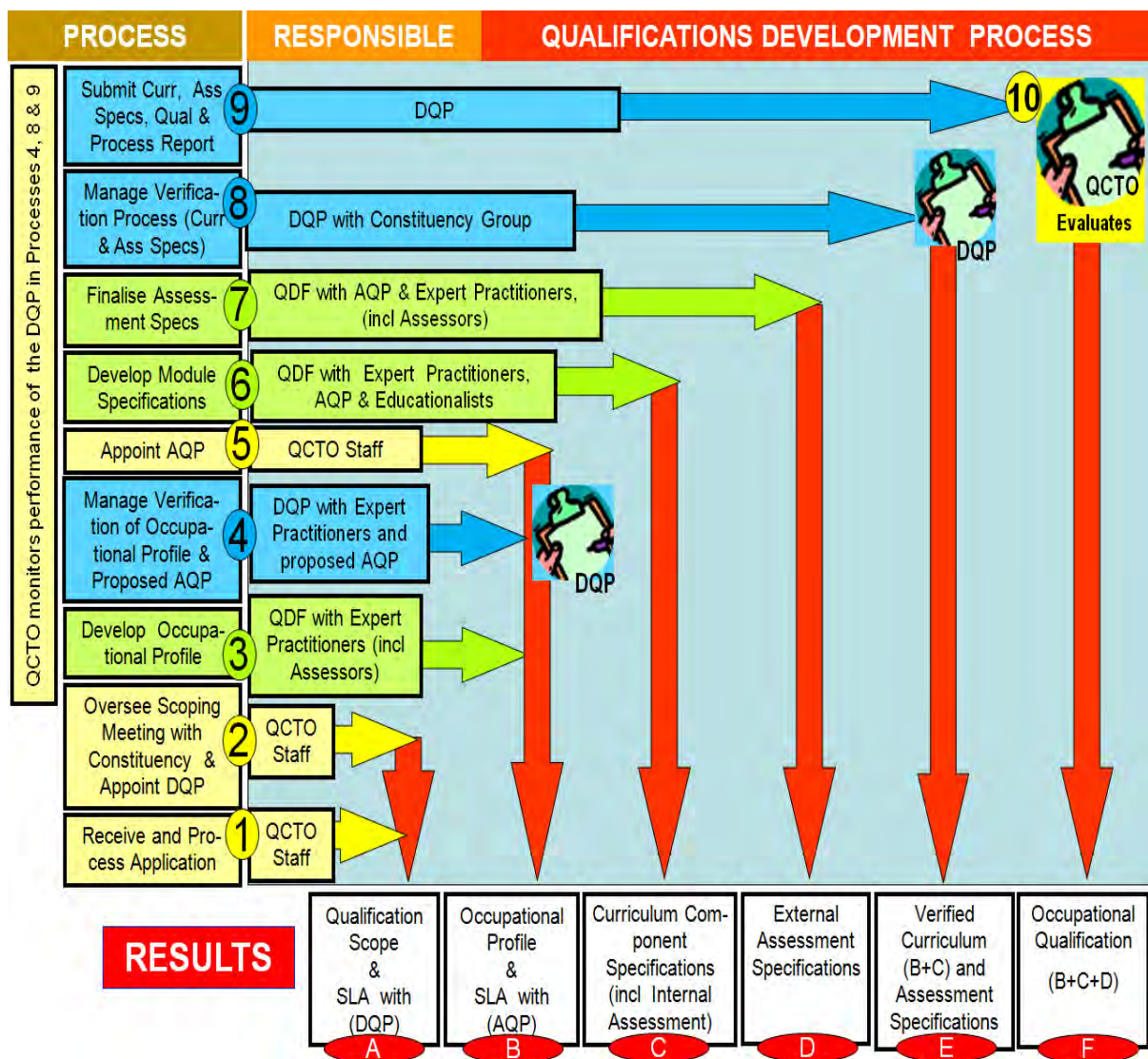
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## PURPOSE OF THIS DOCUMENT

The picture below provides an overview of the main processes during the development of occupational qualifications. The QCTO staff is responsible for all **yellow**, the Qualifications Development Facilitator (QDF) for all **green** and the Development Quality Partner (DQP) for all **blue** processes.

The purpose of this guide is to outline the specific roles and responsibilities of the QDF and learner QDF in relation to that of the QCTO staff and DQP during the qualifications development process.



**Figure 1: Overall occupational qualification development process**

A QDF will be appointed by a DQP to facilitate the development of an Occupational Qualification as indicated in the green processes (3, 6 and 7). This guide provides specific guidance on the steps to be followed, the content to be covered and the rules that must be applied during the development and final capturing processes.



During the above processes various documents must be produced for the QCTO. The responsibilities of the QDF and the processes to be followed by the QDF in the development and generation of these documents are also outlined.

## DOCUMENTS AND REPORTS GENERATED DURING THE QUALIFICATIONS DEVELOPMENT PROCESS

The QCTO requires the following documents to be generated during qualifications development:

- Progress report
- Curriculum
- External assessment specifications document
- Occupational qualification
- Process report

The order of development of these documents in the occupational qualification development process is outlined below.

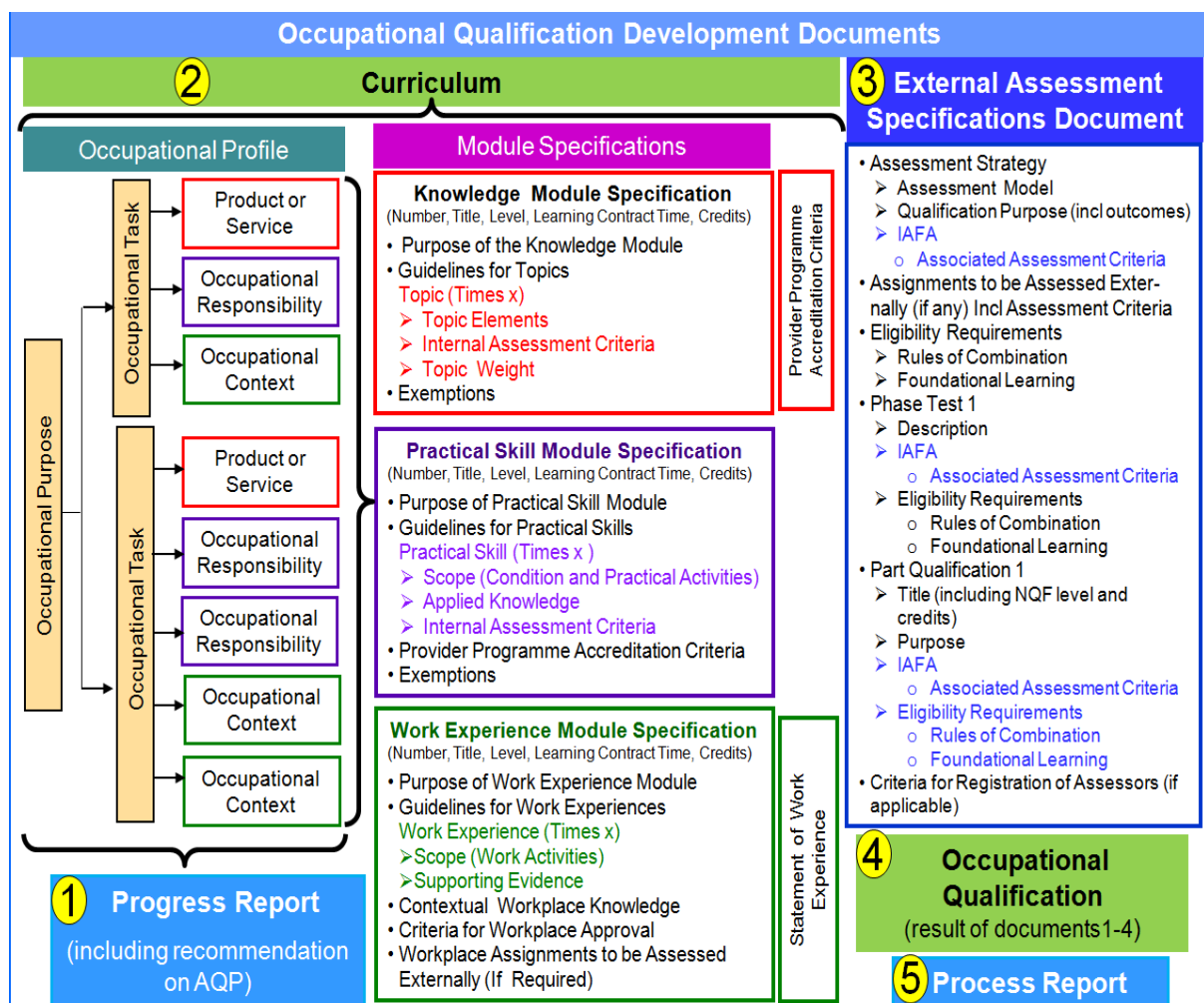


Figure 2: Documents generated during the occupational qualification development process

The QDF is responsible for the development of three of these documents namely the curriculum, the external assessment specifications document and the occupational qualification. Most of the content required for these documents is generated during the working group meetings with experts, facilitated by the QDF, but the generation of some of the information to be captured in these documents is the responsibility of the DQP. On the other hand, the DQP is responsible for the development of a progress as well as a process report, but depends on the QDF for inputs.

## **Occupational curriculum**

An occupational curriculum is based on the occupational profile and facilitates consistency and quality in the provision of learning and internal assessment of all required modules to qualify for an external assessment for the achievement of the associated occupational qualification by:

- specifying the content to be covered within the three learning components (knowledge, practical skills and work experience);
- guiding skills development providers on the development of lesson plans, learning material and internal assessments;
- specifying criteria to be met by skills development providers to obtain programme accreditation to offer and assess knowledge and practical skills components; and
- specifying criteria to be met by employers to obtain workplace approval from SETAs.

The preparation of the occupational curriculum is the responsibility of the QDF. It comprises a summary of the curriculum (including articulation and international comparability obtained from DQP), the occupational profile, a number of module specifications for each of the three learning components of the curriculum and a work experience record.

## **External assessment specifications document**

The external assessment specifications document facilitates consistency and quality in the provision of external integrated summative assessment for the achievement of the associated occupational qualification by:

- specifying the content to be covered by nationally standardised assessment instruments.

If the qualification also includes part qualifications, a separate external assessment specifications document must be developed for each part qualification in addition to the external assessment specifications document for the qualification itself.

The preparation of the external assessment specifications document is the responsibility of the QDF. It comprises a description of the assessment model, qualification purpose, qualification outcomes, assessment standards, assignments to be assessed externally (if any), critical aspects of the internal assessments to be

assessed externally (if any), criteria for the registration of assessors (if applicable), an indication of whether or not foundational learning is a pre-requisite, and eligibility requirements to be met to qualify for the external assessment.

## **Occupational qualification**

The occupational qualification is a combination of the external assessment specifications and aspects of the curriculum and is generated by the occupational qualification capturing tool.

Where applicable, the occupational qualification will also reflect associated part qualifications.

The preparation of the occupational qualification is the responsibility of the QDF. Even though most fields will be populated (by the occupational qualification capturing tool), some items from the process report (generated by the DQP) must be included by the QDF in the qualification. This includes the registered qualifications to be replaced, recorded trades covered and rationale.

## **Progress report**

The purpose of the progress report, to be submitted to the QCTO following the profiling meeting, is to indicate any deviations from the original plan as per the SLA (including OFO code or title), to inform the QCTO which body has been recommended as the Assessment Quality Partner (AQP) and to describe stakeholder participation and responses. The QCTO prescribes the format of this report.

The DQP is responsible for the development of this report but will rely on input from the QDF, especially if changes to the OFO code or title are required or if the agreed scope of the qualification development has changed. See Process 4.4.

## **Process report**

The purpose of the process report is to describe stakeholder participation and responses, and provide additional information that the QDF has to include in the curriculum and qualification that is not obtained through the facilitation process. This mainly relates to the rationale, international comparability and agreements with other QCs and SETAs. The QCTO prescribes the format of this report.

The DQP is responsible for the development of this report and must provide it to the QDF to copy components thereof into the curriculum and/or qualification.

## **Overall responsibility of the QDF**

The overall responsibility of the QDF in the development of the above documents is outlined below.

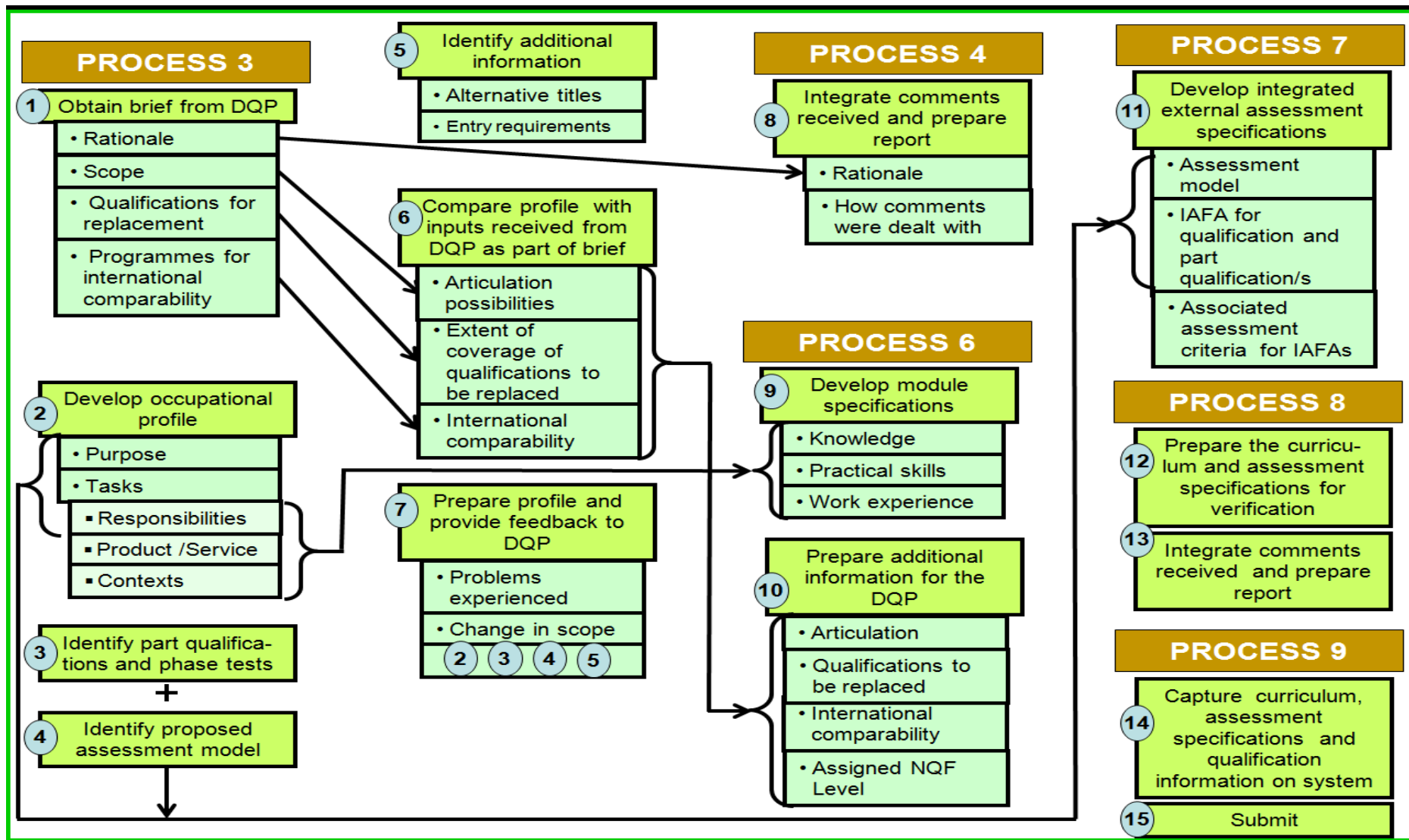


Figure 3: Overall responsibility of the qualification development facilitator

## **FACILITATION**

### **Standardised process**

The consistency and quality of the curriculum, external assessment specifications document and occupational qualifications document is dependent on each facilitator applying the methodology in an appropriate way to produce reliable, valid and equitable results.

This approach is not based on rigid conformance. It is based on achieving a balance between conformance and a sufficient degree of flexibility to ensure fitness-for-purpose. This means that each QDF needs to use the construction rules outlined in this document, that process questions may be supplemented and that process steps can be applied flexibly, for example:

- a) If Step 6 brings up something new, go back to relevant previous steps and adjust them (iterative development).
- b) If information comes up at Step 2 that would be useful in Step 8, capture it and bring it into play at the appropriate time (caching information).
- c) If a process question doesn't elicit the correct response, supplement it with additional questions to tease out the desired information (exploratory facilitation).

### **Guidelines to facilitating working group sessions**

The focus should be on tapping the expertise, knowledge and wisdom of the experts in the various working groups. There are two different roles the facilitator has to play in the process:

- a) Capturing inputs from the experts.
- b) Shaping the inputs to meet the QCTO criteria.

These two roles are very difficult to carry out at the same time. Facilitators should aim to capture as much as possible during the sessions and then afterwards do the shaping, sorting and structuring of the content, however this must be verified with the working group afterwards to ensure that the intended meaning was not changed. Simply to capture the content without further editing means that unstructured brain storming inputs will be reflected as content. Information as it comes from the experts must also be clarified while being collected, to get to what they 'really mean', as the experts' inputs are often in a kind of shorthand that has to be unpacked.

Pitfall	Tips
Experts may sometimes volunteer information which is not appropriate to the question. They may bring up detailed information which is not required early on, but will be required later.	Capture whatever is given and process it later. If participants question why the information is not being used at this stage of the process, indicate that it is useful information that will be included later.
Spending too much time 'wordsmithing' the statements.	Formulate working statements to help the process move forward and indicate that you will refine them later.

During the facilitation process various tools can be used to capture inputs, including:

- a) Word processors
- b) Spreadsheets
- c) Mind maps
- d) Tree-and-leaf information managers
- e) Flip chart paper
- f) Cards and sticky paper

Options a, b, c and d allow for the use of a data projector to show the work in progress and enable the use of technology to show only high level items so as to give the working group an overview before drilling down into detail. This can be done in the outline view of some word processing programmes, but requires some practice. QDFs are advised to prepare a standard template for capturing the information, building in headings, process questions and construction rules.

Pitfalls	Tips
Scrolling up and down the document at rapid speed while trying to find an item – while this may not seem troublesome to you on a laptop screen, to the working group looking at a larger image it can be extremely disorientating and leave people feeling queasy.	Freeze the projector image while searching OR use the search function.

The advantage of options e and f above is that the participants can actively engage in the process by writing up material themselves in smaller working groups. While the capturing will be slower, the content might require less rework since it should already be shaped and structured to a greater extent.

Pitfalls	Tips
Small group work may sometimes result in an over- emphasis of the construction rules and the precise formulation which inhibits more creative thinking.	Monitor the small groups and provide guidance to keep the focus.

## Structuring and editing information

Simply to reflect the collected information in the curriculum without further structuring and editing means that you will be using unstructured brain storming inputs as content. The structuring of information could include:

- a) Restating inputs in plain language.
- b) Allocating inputs to the correct level within the curriculum development system.

Plain language should be used to define the contents of the various documents. This does not imply a 'dumbing down' of language. It is the appropriate use of words to describe what is required in easily understood terms. Frequent use of complex terms or phrases results in sentences which are difficult to understand.

Useful tips include avoiding using "dead-hand writing" (i.e. long sentences heavy with nouns) and "marketing speak" (i.e. pretentious writing to exaggerate the level of performance or aggrandise or inflate the role of the practitioner).

## PROCESS 1: RECEIVE AND PROCESS APPLICATION

Process 1 is managed by the QCTO staff. It is only summarised here to give QDFs an understanding of the entire development process.

The process of qualification development always starts with the submission of an application form. Any person or organisation can apply for an occupational qualification to be developed. The rationale for this is to enable the QCTO to minimise overlap, to initiate a process of engagement with the applicant to establish the extent of the need and impact (rationale), and to identify all relevant stakeholders to be involved in the process to ensure the relevance and credibility of processes and products.

The engagement process includes pre-scoping discussions with the applicant to enable the QCTO staff to prepare for a scoping meeting and obtain an understanding of:

- a) The potential DQP.
- b) The rationale or need i.e. the specific or actual needs that the qualification will meet in relation to a national imperative, professional body or sector requirements for which it is to be developed.
- c) The scope of the qualification (i.e. exact occupation, specialisation/s and possible part qualification/s required to address the need as verified above) in order to ensure there is no duplication of effort in the development.
- d) Possible stakeholders.
- e) The qualifications and associated learning programmes or part qualifications registered on the NQF and recorded trades that must be considered (also for possible replacement) during the development of the qualification (this only relates to qualifications under the auspices of the QCTO and thus also includes all qualifications previously allocated to SETA ETQAs).
- f) Possible AQP/s.



The outcome of the pre-scoping process is to:

- a) Obtain, in principle, agreement (with all relevant SETAs) on which stakeholders should be invited to the scoping meeting and who would be required to form part of the development process, including:
  - i) employers;
  - ii) employee associations or federations with membership in that occupation;
  - iii) professional bodies or occupational associations for the occupation;
  - iv) industry bodies for that occupation, and
  - v) education and training providers who would deliver one or more of the components.
- b) Obtain agreement on the proposal to be tabled at the scoping meeting (scope and DQP).
- c) Obtain agreement on a date for the scoping meeting.
- d) Obtain agreement on the funding and arrangement of the scoping meeting.

**Note 1:** *The QCTO will aim at reducing duplication and ensuring articulation and progression by guiding towards the development of part qualifications rather than separate qualifications and preventing the development of job, company or product specific qualifications.*

## PROCESS 2: OVERSEE SCOPING MEETING WITH CONSTITUENCY AND APPOINT A DQP

Process 2 is managed by the QCTO staff. It is only summarised here to give QDFs an understanding of the entire development process.

The purpose of the scoping meeting is to provide the QCTO with the assurance that the need (rationale) and scope (specific occupation and specialisation to address the need) are supported and that there is sufficient stakeholder buy-in and commitment for the development of the proposed qualification to justify the development thereof.

The minutes of the scoping meeting will provide the basis for the SLA to be signed between the QCTO and the recommended DQP and must reflect:

- a) Attendance as per constituency invited (stakeholder involvement).
- b) Confirmation of the need (rationale) and scope of the qualification (actual occupation or specialisation for which a qualification is to be developed).  
In accordance with SAQA, the rationale should provide a description of:
  - i) Details on the reasoning that led to identifying the need for the qualification,
    - o e.g. new occupation, existing qualifications outdated, classified as a scarce occupation, etc.
  - ii) The specific needs that the qualification will meet in the sector for which it is to be developed, including consultation with a recognised professional body or industry body.
  - iii) The benefits it will have for society and the economy, for example the range of typical learners and the occupations, jobs or areas of activity in which the qualifying learners will operate, and the contribution to national strategies, where applicable,
    - o e.g. reference to the green economy, number of learners that will benefit.
  - iv) Where applicable, the learning pathway where the qualification will reside in terms of the occupation,
    - o e.g. if it is an entry into a specific occupation or a further specialisation to allow for career progression.
- c) Name of body approved for recommendation as DQP.

- d) Stakeholder organisations to be involved (stakeholders with a direct interest in the occupation) either as members of the working groups or during the verification processes, including:
  - i) SETAS with a link to employers/workplaces and that currently have learnerships or trades registered for the related occupation;
  - ii) employer and employee associations or federations with membership in that occupation;
  - iii) professional bodies or occupational associations for the occupation;
  - iv) industry bodies for the occupation; and
  - v) education and training providers who would offer one or more of the components.
- e) Qualifications and associated learning programmes and part qualifications registered on the NQF and recorded trades that have to be considered (also for possible replacement) during the development process (this only relates to qualifications under the auspices of the QCTO and thus also includes all qualifications previously allocated to SETA ETQAs).
- f) Possible bodies that can fulfil the role of AQP and the process to be followed to obtain agreement on the recommendation to the QCTO in this regard.
 

**Note:** *Willingness of at least one body (even if it is the potential DQP) to take on this function is a requirement for signing the SLA with a DQP. This willingness must be reflected in the minutes of the scoping meeting to continue with the process.*
- g) Agreed time frames and start date of the profiling meeting.
 

**Note:** *Time frames must be realistic and provide for 15 working days for the preparation of the SLA by the QCTO, the time required by the DQP for signing of the SLA, and an additional 15 working days for the signing by the QCTO.*
- h) Nominated working group members where possible.
- i) Agreement on verification processes.

After the scoping meeting the nominated DQP will receive a partly pre-populated SLA (Annexure A - DQP SLA) for every occupation and a Schedule 1 (DQP project details and timeframes) for every occupation and/or specialisation agreed to) from the QCTO.

The DQP must:

- a) Appoint a QDF and may appoint a learner QDF for every occupation and/or specialisation agreed to.
- b) Complete outstanding details and sign the SLA (Annexure A - DQP SLA) and related Schedule 1s.
- c) Submit the SLA with all supporting documents to the QCTO.

## PROCESS 3: DEVELOP OCCUPATIONAL PROFILE

The actual development process is led by the QDF or Learner QDF. The DQP is responsible for managing the process, providing administrative support to the QDF or Learner QDF, and communicating with stakeholders.

This process consists of:

- Process 3.1 Coordinate profiling working group meeting (DQP)
- Process 3.2 Obtain brief and research information from DQP (QDF)
- Process 3.3 Develop occupational profile (QDF)

**Note 1:** *The development of the occupational qualification may only commence after the signing of the SLA and under the guidance of a QCTO registered Qualifications Development Facilitator (QDF).*

**Note 2:** *QDFs are often appointed to assist an applicant to identify the need and submit an application. This does not constitute the official profiling process that follows the signing of a SLA.*

### 3.1 Process 3.1: Coordinate profiling working group meeting (DQP)

Process 3.1 is the responsibility of the DQP. The DQP must arrange a working group meeting (at least two days – including the logistics) and ensure sufficient administrative support to the QDF including:

- a) Recordkeeping of attendance (the pre-populated attendance register template attached as Annexure A to this manual must be used);
- b) Ensuring alternates complete their relevant details on the attendance register; and
- c) Monitoring attendance and participation of experts.

**Note 1:** *It is not part of the functions of the QDF or learner QDF to provide administrative support. The QDF (unless a permanent staff member of the DQP) may not send out letters of invitation to stakeholders to participate in working group meetings as they do not have any authority in this regard. Such letters should go out on the responsible DQP letterhead clearly indicating that it is the QCTO appointed DQP inviting participation.*

**Note 2:** *The QDF must communicate any difficulties to the DQP responsible officer to arrange additional expert practitioners should all sectors not be covered (e.g. for electrician, a qualified electrician from each sector that previously trained electricians should be present to ensure that the new qualification makes provision for all sectors).*

## 3.2 Process 3.2: Obtain brief and research information from DQP

During Process 3.2, the information outlined below is obtained from the DQP.

- a) A copy of the record of the scoping meeting and the relevant Schedule 1/s of the SLA to obtain an understanding of the rationale (need for the development, see Process 2 paragraph b for requirements) precise scope i.e. exact occupation and or specialisations for which qualifications must be developed and the timeframes for development. It is important that this information is obtained prior to the signing of a contract with the DQP.
- b) Research on international comparability of best practice to be taken into consideration during the development of the occupational qualification. This information includes:
  - i) any qualifications elsewhere in the world or on other national or regional qualifications frameworks aimed at this occupation;
  - ii) any occupational development processes elsewhere in the world (for example training, apprenticeship or professional development schedules or programmes) aimed at this occupation;
  - iii) the nature of this training in terms of duration (including the ratio of time spent at the workplace to time spent on institutional training); and
  - iv) the content covered in the training.
- c) Information on qualifications and associated learning programmes and part qualifications registered on the NQF and recorded trades that must be considered (also for possible replacement) during the development process.

**Note 1:** *The facilitation function of the QDF or Learner QDF does not include collection of information on qualifications and learning programmes elsewhere in the world. This is part of the “legwork” carried out by the DQP prior to the development of the occupational profile and the QDF or Learner QDF must have access to this information to ensure that value is added during the development process. It is however the responsibility of the QDF or Learner QDF to provide feedback to the DQP on the international comparability of the newly developed qualification (see Process 6.2.4.1).*

**Note 2:** *It is also not part of the function of the QDF to collect information on the qualifications to be considered (unless a permanent staff member of the DQP). The QDF or Learner QDF must however inform the DQP on the extent to which these qualifications are covered or not covered by the newly developed qualification (see Process 8.1.2).*

### 3.3 Process 3.3: Develop occupational profile

During Process 3.3 the occupational profile is developed. The occupational profile is one of the results (Result B) of the qualification development process and comprises an occupational purpose and the occupational tasks that are performed by practitioners of that occupation. Each task also incorporates a related product or service, one or more occupational responsibilities and one or more occupational contexts. The occupational profile forms the unit of analysis for the development of learning modules (module specifications) for the three curriculum components as well as the external summative assessment specifications.

The occupational profile is developed by experts in the occupation and employers. It is an iterative process and includes eight steps:

- |         |   |
|---------|---|
| Step B1 | Define the provisional occupational purpose   |
| Step B2 | Identify the stages in the production cycle or steps in the business process  |
| Step B3 | Identify the unique products or services for the occupation or specialisation and check these against the OFO tasks |
| Step B4 | Identify the occupational responsibilities and practical skills for each product or service                         |
| Step B5 | Identify the occupational contexts and work experiences for each product or service                                 |
| Step B6 | Identify part qualifications and points for external assessment   |
| Step B7 | Finalise the occupational purpose and task statements   |

The figure below provides a graphical illustration of the above mentioned process steps.

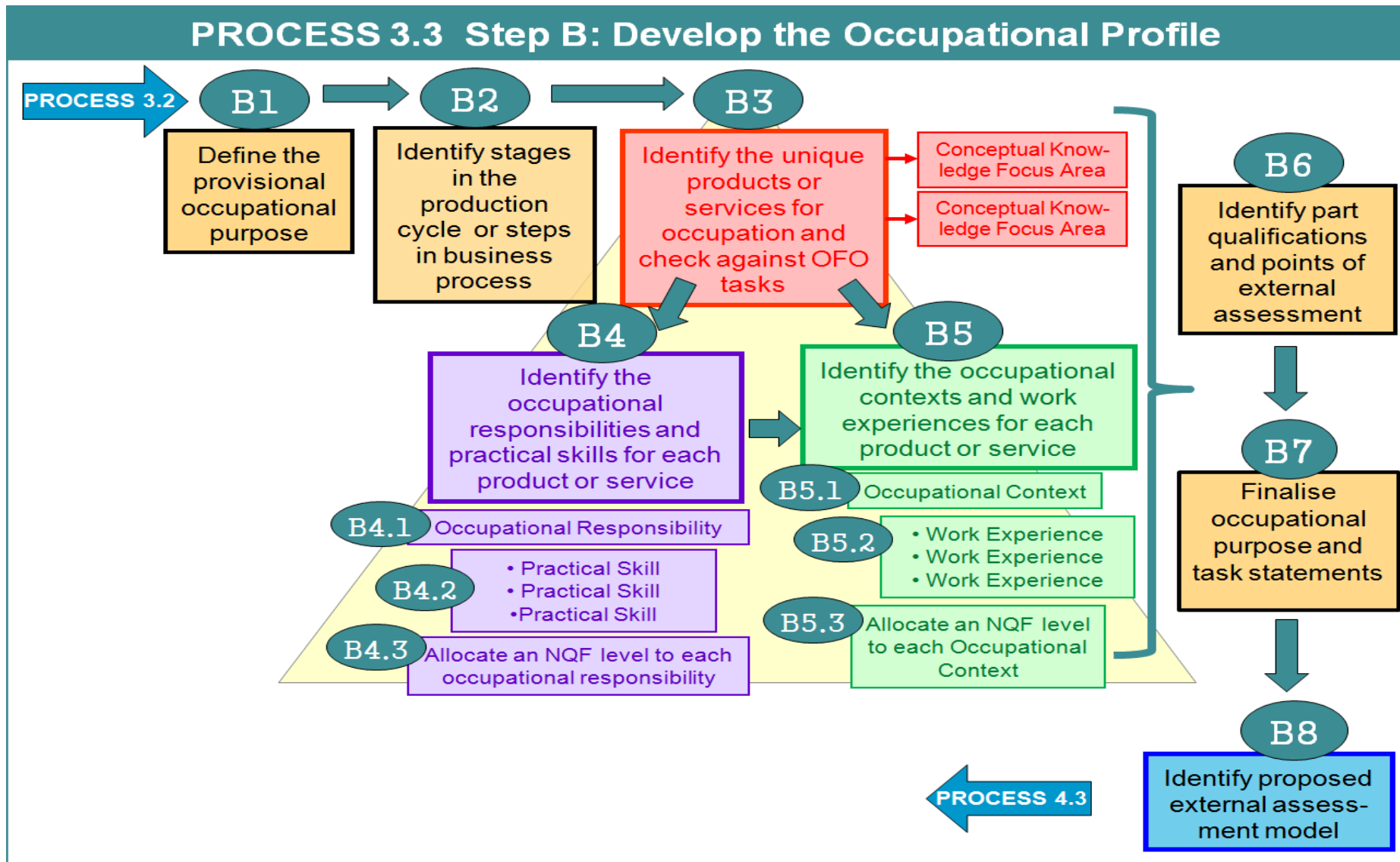


Figure 4: Steps for developing the occupational profile

The actual occupational profile is the result obtained from Steps B1 – B5 and B7. The result of the steps and the relation thereof to the learning modules (module specifications) of the curriculum is outlined below.

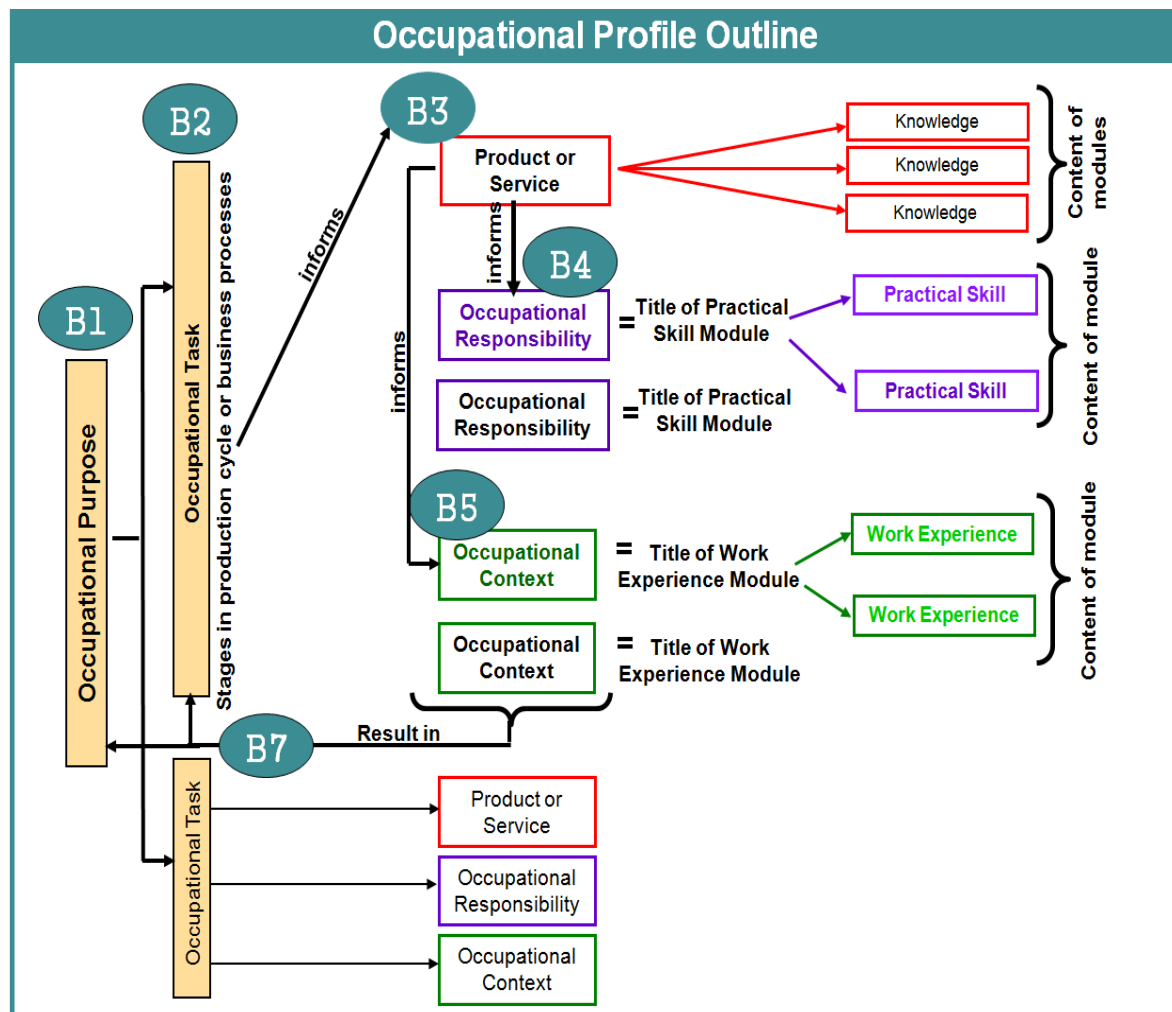


Figure 5: Outline of the elements of the occupational profile

### 3.3.1 Step B1: Define the provisional occupational purpose

During Step B1 the provisional occupational purpose is defined. The occupational purpose must reflect the unique contribution that the specific occupation or specialisation/s makes to the labour market, taking into account the various contexts in which it is practised.

The occupational purpose must be derived from the occupational descriptor on the OFO. It is also important to consider the unit group descriptor on the OFO to ensure that the purpose statement relates to the broader description. In the case of more than one specialisation, each purpose statement must also relate to the occupational descriptor on the OFO and the relation and difference between them must be clear. Occupational purposes may not be differentiated from one another on the basis of a specific “brand” or “make” of equipment (i.e. must not reflect a job or be sector specific).



The occupational purpose will, once refined (during Step B7), also reflect as the relevant occupational qualification purpose.

The reason for defining a provisional occupational purpose is, where applicable, to obtain a clearer picture of the various occupational specialisations in relation to the actual occupation.

**Process Question**

**With reference to the occupational descriptor on the OFO:**

- Consider the relevant descriptor on the OFO and ask: “Is this what a person in this occupation is mainly responsible for?”
- If a specialisation is being considered, ask: “How will this responsibility differ from the occupation or other specialisations?”

**With reference to the occupation or specialisation for which a qualification is to be developed, ask:**

- “What is the unique contribution that this occupation or specialisation makes to the labour market?”

There are no specific construction rules, but the initial purpose should be written down, tested and verified later in the process (see Step B7.3) to ensure that the initial need was not deviated from and to ensure that the occupation is correctly described.

**Note:** *There need to be a clear distinction between the purposes of different specialisations where applicable.*

### 3.3.2 Step B2: Identify the stages in the production cycle or steps in the business process

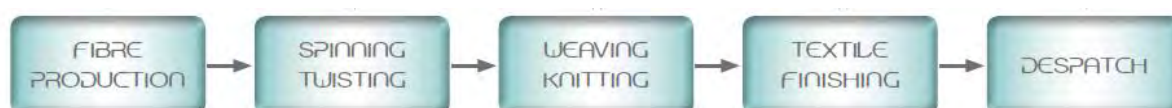
Step B2 is the first step in understanding what the occupational tasks are about. During this step the various stages in the production cycle or steps in the business process of the occupation are identified. These stages or steps drive the identification of the products and services and the eventual formulation of occupational tasks during Step B7.

**Process Question**

**With reference to the provisional occupational purpose, ask:**

- “What are the various stages of the production cycle or steps in the business process associated with the occupation?”

For example



Textile conversion processes

There are no specific construction rules, but the stages of the production cycle or steps in the business process should be recorded, tested and verified during Step B3

and translated into occupational task statements during Step B7. There should not be more than eight occupational tasks and therefore not more than eight stages in the production cycle or steps in the business process related to the occupation should be identified.

Clarify and confirm that each and every stage or step identified actually falls within the scope of the occupation and/or specialisation for which the qualification is to be developed and whether this is in line with the scope confirmed in the SLA (see Process 3.2 above). This also provides an indication of whether additional expertise will be required for the development of the occupational profile.

### **3.3.3 Step B3: Identify the unique products or services for the occupation or specialisation and check these against the OFO tasks**

#### **3.3.3.1 Step B3.1: Identify the unique products or services for the occupation or specialisation**

During Step B3.1 the unique product or service that is produced or delivered by practitioners (i.e. after achieving this qualification in a real working environment), during each stage of the production cycle or step in the business process is identified.

The products or services direct the formulation of the occupational task statements during Step B7 and guide the identification of the occupational responsibilities and occupational contexts as well as the conceptual or disciplinary knowledge requirements of the occupation.

There should not be more than 8 unique products or services per occupation.

**Process Question**

**With reference to each stage in the production cycle or step in the business process, ask:**

- “What is the main output (product or service) at each stage of the production cycle, or step in the business process?”
- “What can you show or what will be the end result of this stage?”

**Alternatively, with reference to the occupation as a whole, ask:**

- “What are the unique products or services produced or delivered by practitioners of the occupation?”

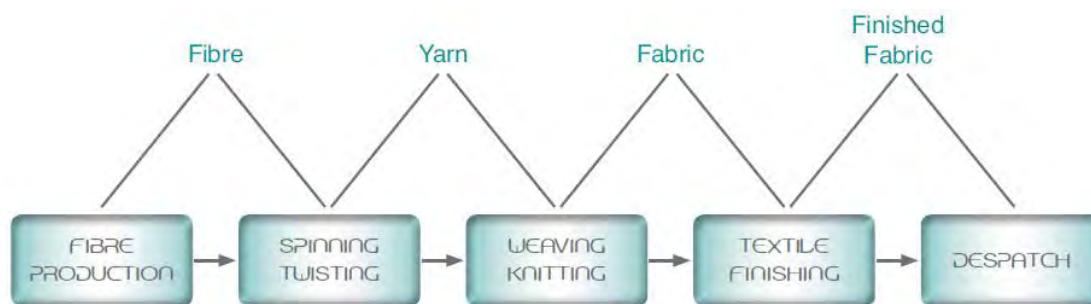
(Generally speaking the difference between a product and a service can be clarified with the following statement: “Products can be touched, services make you smile or cry.”)

- “Are there any unique products or services related to environmental issues and/or natural resources?”

Probe for products or services by asking participants:

- “What would people ask you for or ask you to do?”
- “What are you being paid for/ to do?”

For example:



The main output of each stage in the textile conversion process

**Note:** The group may come up with a list of products or services that actually reflect the outcome of intermediate stages. One word should be found to describe such lists (a collective noun). A record must be kept of all the “intermediate” products or services for consideration during Step B4 and Step B5 below.

Construction Rules
<ul style="list-style-type: none"> <li>• Specify the physical or digital objects produced or the service rendered.</li> <li>• A product can be stated as a noun or phrase and can have an adjective. No verb must be used.</li> </ul>

Examples
<u>Fitter and Turner:</u> Operational machinery
<u>Plastics Manufacturing Machine Setter:</u> Plastics production equipment producing products
<u>Port Manager:</u> Efficient port support operations
<u>Transport Coordinator:</u> Transport schedules

**Note:** Do not state the product or service as something that has been achieved.

Not this	But rather this
Machine and auxiliary equipment, set-up, programmed, start-up, monitored and shut-down according to procedure. <ul style="list-style-type: none"> <li>• These are all activities that contribute to the overall outcome.</li> </ul>	Plastics production equipment producing products <ul style="list-style-type: none"> <li>• This is what the setter leaves behind after the task has been completed.</li> </ul>
Transport schedule prepared <ul style="list-style-type: none"> <li>• Preparing is part of the activity.</li> </ul> or Prepared transport schedule <ul style="list-style-type: none"> <li>• It is not necessary to state that it has been prepared.</li> </ul>	Transport schedules <ul style="list-style-type: none"> <li>• This is what the clerk hands over on completion of the task.</li> </ul>
Using generalised words which could apply to any occupation or job, e.g. raw materials.	Select the common words used for the type of raw material, e.g. plastic pellets, or plastic raw materials.
Adding verbs to products, e.g. Advice provided on labour relations	Advice on labour relations
Describing the quality or conformance requirements of the product e.g. concrete slab laid according to site-specific standards	Restrict the item or phrase to the key output, product or service, e.g. Concrete slab

### 3.3.3.2 Step B3.2: Check products and services against the OFO tasks

During step B3.2, the tasks indicated in the OFO (at unit group level) are checked to see if they contain any elements related to the occupation or specialisation being considered which have been overlooked during the identification of the products or services. This step will also assist in identifying possible horizontal articulation possibilities.

**Note:** The OFO tasks at unit group level only serve as a reference point. This step does not suggest that all the tasks should be covered as this will hardly ever be the case unless the qualification is developed at unit group level.

<b>Process Question</b>	<p><b>With reference to the OFO tasks at Unit Group level, ask:</b></p> <ul style="list-style-type: none"> <li>• “Are there any additional stages of the production cycle or steps in the business process that must be added to the list?”</li> <li>• “What additional products or services must be included?”</li> <li>• “Are there any other related occupations that this occupation or specialisation might articulate to?”</li> </ul>
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### 3.3.3.3 Step B3.3: Identify the knowledge focus areas

During Step B3.3 the knowledge required to produce the product or service is identified. Knowledge focus areas refer to the disciplinary or conceptual knowledge, theory and information required to produce the product or service. The knowledge identified here will be considered during the development of the knowledge module specifications during Process 6, Step C3.

**Note:** *The other curriculum components also contain knowledge. The knowledge related to the other curriculum components refers to the specific knowledge required to execute practical or work activities. This knowledge is unpacked during Steps C1.2 and C2.2.*

**Process Question**

**With regards to the identified products / services, ask:**

- “What underlying concepts, principles and disciplinary knowledge or theory should the learner know/understand regarding this product/service in order to deliver it?”
- “What are the knowledge requirements which guide the performance/practice to arrive at this product or service?”
- “Is any environmental and/or natural resources-related information required?”

Construction Rules
<ul style="list-style-type: none"> <li>• Compile a short statement of the specific required conceptual knowledge that can be taught in a general education institution.</li> <li>• The statements must be independently recognisable.</li> <li>• Link the statement to the relevant product or service for future reference.</li> <li>• If required, qualifiers may be used to reflect the complexity of the knowledge required e.g. basic, intermediate and advanced.</li> </ul>

Examples
<ul style="list-style-type: none"> <li>• Textile production processes.</li> <li>• Tools, equipment and components for solar installations.</li> <li>• Labour relations principles.</li> </ul>

Not this	But rather this
Listing individual knowledge items, i.e. pitching the level of detail too low.	Focus on larger chunks of information. Use words such as theory, principles, strategies etc.
“Floating” between levels of detail, i.e. listing too many items.	The information gathered here might become the “chapters of the textbook”. Therefore the level of detail should be kept in mind.

### 3.3.4 Step B4: Identify the occupational responsibilities and practical skills for each product or service

During Step B4 the occupational responsibilities and associated practical skills are defined.

When defining the occupational responsibilities and practical skills, the differences between these and work experiences must be considered. See the note below.

#### 3.3.4.1 Note on differences between practical skills and work experiences

The curriculum differentiates between practical skills and work experiences. There is however some overlap.

Practical skills are developed in a training facility, i.e. in a controlled or simulated work environment in a learning institution or actual workplace in preparation for applying them in the workplace. Work experiences can only be offered in the real-time, real-life context of specific working environments provided by employers.

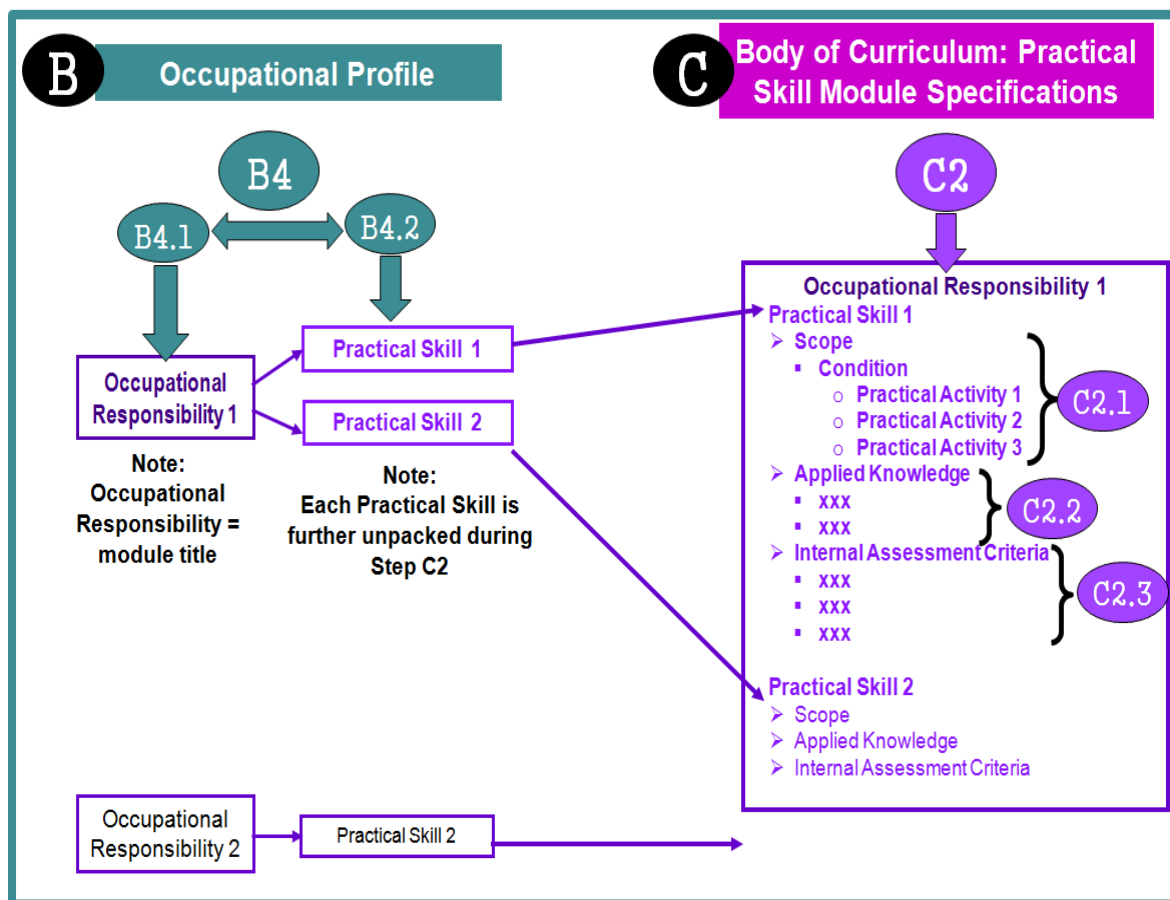
What differentiates the practical skills and work experiences is the nature and purpose of the learning, the relationship of the ‘teacher or instructor’ to the learner and the way in which the learning is assessed. The following table summarises some of these differences:

	Practical Skills	Work Experience
1	Linked to individual learning tasks or activities.	Linked to more comprehensive occupational tasks.
2	Separate practical tasks in isolation resulting in a product or service.	Tasks / activities as part of an overall delivery of products or services.
3	Overseen and supported by an instructor or trainer.	Overseen by the supervisor or manager (perhaps with some support through coaching or mentoring).
4	Developing techniques.	Developing occupational practice through applying techniques.
5	Linking specific theory and applied/practical knowledge to practical tasks.	Linking contextual and specialised knowledge to situated occupational practice.
6	The task or activity is conducted in terms of a learning plan.	The task or activity is conducted in terms of an instruction or an occurrence.
7	Outputs are used for purposes of assessment.	Outputs contribute to the work of the organisation.
8	The learning is about the application of rules and standardised actions and responses.	The learning is about reading the occupational context and understanding situational cues and clues.
9	The learning is about building an understanding of the link between general theory and practical application in narrower contexts.	The learning is about building an understanding of the link between specialised theory and practice in broader contexts.
10	The learning is about mastering procedures.	The learning is about understanding the contextual environment and assessing, when, where and how to respond.

### 3.3.4.2 Occupational Responsibilities

An occupational responsibility refers to a cluster or group of practical skills that must be performed to produce a specific product or service or a component thereof. It is thus a summary of a number of practical skills at a specific level of complexity. Each occupational responsibility becomes the title of a practical skill module in the curriculum.

Some QDFs find it easier to start with Step B4.1 (Identify the occupational responsibilities) whilst others find it easier to start with Step B4.2 (Identify practical skills). In essence it is an iterative process that will be taken forward during the development of the practical skill modules as indicated in Figure 5 below.



**Figure 6: Linkage between the Occupational Responsibilities, Practical Skills and Practical Activities**

### 3.3.4.3 Step B4.1: Identify the occupational responsibilities

During Step B4.1 the occupational responsibilities of practitioners towards the delivery of each identified product or service are identified.

More than one responsibility can be identified for each product or service. This will specifically be required to allow for developmental responsibilities.

Developmental responsibilities refer to clusters of practical skills at lower levels of complexity which must be acquired during the occupational learning process. Developmental responsibilities can be seen as building blocks and can also be used for part qualifications.

For each occupational responsibility a practical skill module will be developed. The occupational responsibility will be reflected as the title of the practical skill module. It must be remembered that each occupational responsibility reflects a number of practical skills and each practical skill will again be broken down into a number of practical activities as can be seen in Figure 5 above.

**Process Question**

**With regard to each identified product and service, ask:**

- “What are the responsibilities in relation to each product or service?”
- “What are the building blocks that form a subset of, or that are required to produce, each identified product or service?”
- “What must be done in terms of each product or service?”
- “Are there any responsibilities specifically related to environmental issues and/or natural resources?”

*Note: Often practical skills and even practical activities are given instead of occupational responsibilities. The facilitator must nevertheless keep a record of all inputs and then ask the question:*

- “Which inputs can be clustered together and what statement summarises a set skills to be reflected as a module title?”

Construction Rules
<ul style="list-style-type: none"> <li>• Identify a word or phrase that best describes the overall responsibility or function of a person towards the delivery of the product or service.</li> <li>• Start with a verb in its simplest form, i.e. without an “s”.</li> <li>• Then add a description of the “what” in <b>plural</b>, i.e. a noun/s to describe the product / service or building block.</li> </ul>

Examples
<p><u>Fitter and Turner</u>: Replace components and sub-assemblies and assemble machines</p> <p><u>Plastics Manufacturing Machine Setter</u>: Set-up, programme and shut-down machinery and auxiliary equipment</p> <p><u>Port Manager</u>: Maintain port support operations</p> <p><u>Transport Coordinator</u>: Plan and prepare transportation schedules</p>



Not this	But rather this
Ensure compliance within the regulatory and legislative frameworks for airports and harbours. <ul style="list-style-type: none"> <li>• “Ensure” is a generalised term which does not describe the actual activity to be learned</li> </ul>	Determine/assess/verify/monitor regulatory and legislative compliance of ... OR Identify and respond to regulatory and legislative non-compliances
Receive, weigh and sort flock, yarn or fabric for dyeing or bleaching”. <ul style="list-style-type: none"> <li>• These activities will appear as individual skills within the module.</li> </ul>	Prepare flock, yarn or fabric for dyeing or bleaching.
Maintain pump <ul style="list-style-type: none"> <li>• This gives the impression that only one type of pump will be maintained.</li> </ul>	Maintain pumps <ul style="list-style-type: none"> <li>• This allows for practical skills relating to various types of pumps.</li> </ul>

**Note:** *Keep a record of all activities listed for consideration in the next step (see 3.3.4.2).*

#### **3.3.4.4: Step B 4.2: Identify the practical skills for each occupational responsibility**

During Step B4.2 the practical skills required for each occupational responsibility are identified. More than one practical skill should be identified for each responsibility.

All practical skills linked to a specific responsibility should be at the same NQF level. This might result in the identification of more occupational responsibilities to reflect additional levels and allow for building blocks.

It should be noted that some QDFs find it easier to start with this step and then to cluster the practical skills into occupational responsibilities (see Step B4.1). Either approach is acceptable.

The practical skills relate to those critical aspects the practitioner should be able to carry out safely and accurately in order to execute the occupational responsibility or function.

If there are too many practical skills or if they are at different levels of complexity, it will be necessary to identify additional occupational responsibilities. On the other hand, if there is only one practical skill per responsibility, the identified responsibility is probably only a skill and not an occupational responsibility.

## Process Questions

With reference to each of the identified occupational responsibilities, ask:

- “What steps must be taken in order to deliver the product or service or execute the responsibility?”
- “What skills are required to execute the responsibility or deliver the product or service?”
- “What must the person be able to do or learn to do in order to execute the responsibility?”

**Note:** The facilitator must also consider those practical skills and activities identified during Step B4.1 (see 3.3.4.3).

### Construction Rules

The practical skills must be listed and must follow the sentence: “The learner will be required to:”

- Start with a verb in its simplest form, i.e. without an “s”.
- Then add a description of the “what” in plural.

### Examples

Fitter and Turner:

**Module:** Replace components and sub-assemblies and assemble machines

**Practical skills:** The learner will be required to:

- Replace gearbox components and assemble gearboxes
- Replace pump components and assemble pumps
- Replace brake components and assemble brakes
- Replace drive components and assemble drives
- Replace bearings

Plastics Manufacturing Machine Setter

**Module:** Set-up, programme and shut-down machinery and auxiliary equipment

**Practical skills:** The learner will be required to:

- Set-up and programme machinery and auxiliary equipment
- Shut-down machinery and auxiliary equipment
- Monitor manufacturing processes
- Adjust machinery and auxiliary equipment

Port Manager:

**Module:** Maintain port support operations

**Practical skills:** The learner will be required to:

- Develop organisational strategies for port operations
- Develop proposals, action plans and budgets to operationalise infrastructure maintenance, development and resourcing
- Monitor and evaluate port operational records against performance standards

Transport Coordinator:

**Module:** Plan and prepare transportation schedules

**Practical skills:** The learner will be required to:

- Plan and prepare the development of the transport schedules

Not this	But rather this
Referring to generic skills – “analytical skills”, “communication skills”, “interpersonal skills”.	Make sure that the actual practical skill that must be performed is described.
Stating the “what” in singular form as doing a thing once. This is sufficient to develop the skill.	
Using adverbs, e.g. “correctly” or adverbial phrases such as “according to procedures”.	
Facilitate formulation of organisational strategies for port operations. <ul style="list-style-type: none"> <li>• “Facilitate” requires real interaction which in this context is not possible</li> </ul>	Develop organisational strategies for port or harbour operations <ul style="list-style-type: none"> <li>• This can be done with case studies and scenarios</li> </ul>
<u>Port Manager:</u> Ensure infrastructure maintenance, development and resourcing <ul style="list-style-type: none"> <li>• “Ensure” should not be used.</li> </ul> Monitor and evaluate against performance standards <ul style="list-style-type: none"> <li>• “Monitor and evaluate” what?</li> </ul>	<u>Port Manager:</u> Develop proposals, action plans and budgets to operationalise infrastructure maintenance, development and resourcing <ul style="list-style-type: none"> <li>• State the activities or actions that comprise “ensure”.</li> </ul> Monitor and evaluate airport or harbour operational records against performance standards
<u>Transport Coordinator:</u> Conduct preparatory activities <ul style="list-style-type: none"> <li>• “Conduct preparatory activities” does not provide sufficient guidance to providers – it is too broad. The term is very general and could apply to many occupations.</li> </ul>	<u>Transport Coordinator:</u> Plan and prepare the development of the transport schedules <ul style="list-style-type: none"> <li>• State the action or actions that comprise preparatory activities.</li> </ul>

### 3.3.4.5 Step B 4.3: Determine the NQF level of each occupational responsibility

During Step B4.3 the intended NQF level of each occupational responsibility is determined. This also includes determining the NQF level of each practical skill. Where not all practical skills assigned to a specific responsibility reflect the same NQF level, an additional responsibility must be identified for each level.

Each occupational responsibility is linked to a particular NQF level using the LARF (Level, Activities, Roles, Focus) document. The LARF document is a contextual interpretation of the NQF level descriptors and is used as a guideline for the occupational qualification sub-framework.

The SAQA level descriptors are used and then confirmed by starting with the “Typical activities” and “Role” columns to determine which description is the most appropriate for the specific occupational responsibility, taking into consideration the associated practical skills supporting it. There should be some degree of correlation between the activities in the LARF and the occupational responsibility.

The following table provides a summary of the LARF, but the complete LARF tool provided in Annexure B to this manual should be used when allocating NQF levels to the occupational responsibilities.

Levels	Typical activities	Role	Workplace Focus	Time span of Discretion
10	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession	10-15 years
9	Set and implement strategies	Leading and directing	The 'business landscape' or profession	5-10 years
8	Manage or design systems	Resource management	Policy, resource allocation	3-5 years
7	Manage or design processes	Changed practices	New technology, systems	1-3 years
6	Develop and implement changes	Optimisation	Improvements	6 mth -1yr
5	Maintain efficiencies	Stability and consistency	Systems	3-6 mth
4	Setup processes and solve process problems	Process management	Process data	1-3 mth
3	Adjust, maintain and oversee	Procedures	Productivity	1wk
2	Monitor, support	Operations	Machinery	1day
1	Perform elementary tasks	Tasks	Machines, tools	

**Process Question**

**With regard to each identified occupational responsibility, ask:**

- “Which NQF Level should this occupational responsibility be pegged at?”

Examples
<u>Fitter and Turner</u> : Replace components and sub-assemblies and assemble machines, NQF Level 3.
<u>Plastics Manufacturing Machine Setter</u> : Start-up and shut-down machinery and auxiliary equipment, NQF Level 3 Set-up, programme and shut-down machinery and auxiliary equipment, NQF Level 4
<u>Port Manager</u> : Maintain port support operations, NQF Level 6
<u>Transport Coordinator</u> : Plan and prepare transportation schedule, NQF Level 4

### 3.3.5 Step B5: Identify the occupational contexts and work experiences for each product or service

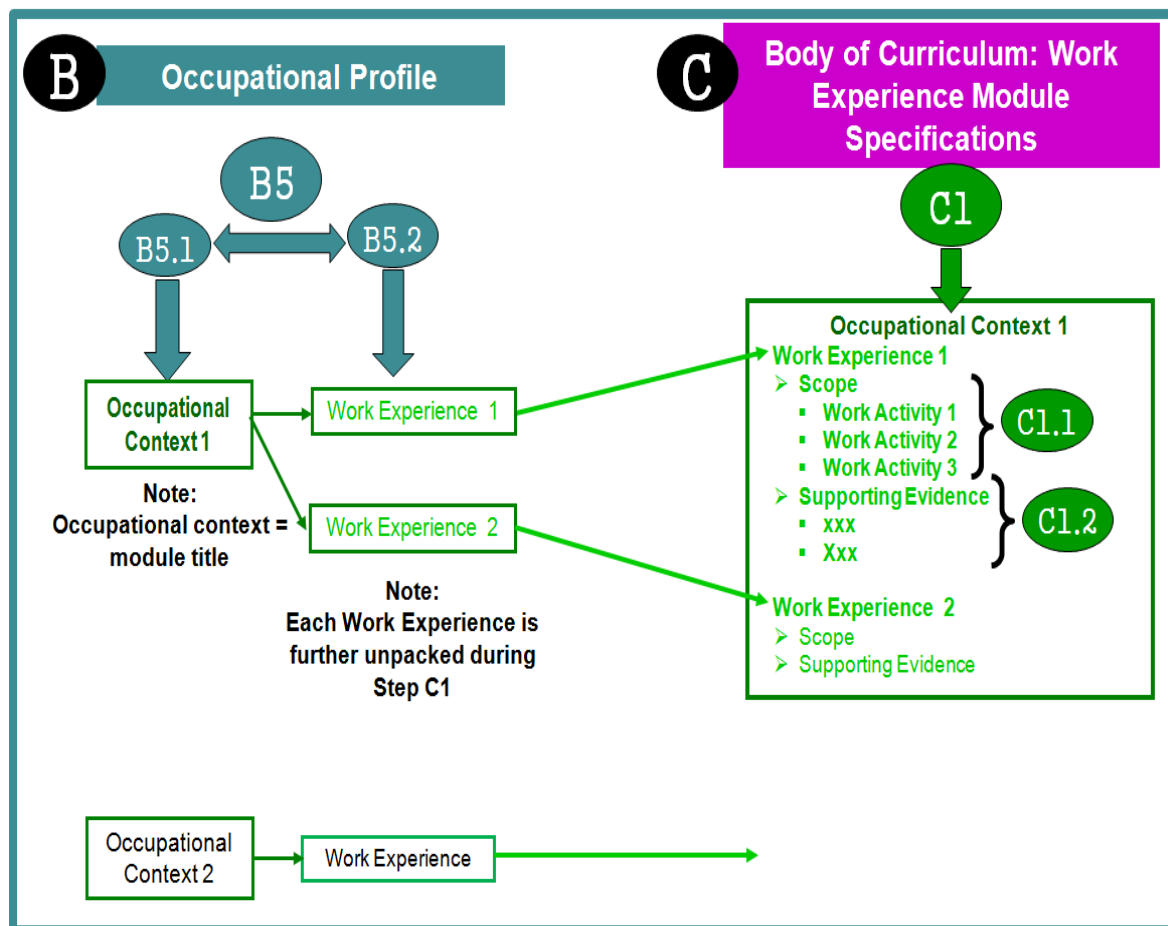
During Step B5 the occupational contexts and associated work experiences are defined.

An occupational context refers to the key processes, situations or physical settings that the learner must experience or be exposed to in a workplace to develop competence with regards to the identified product or service and/or the occupational

responsibilities. Each occupational context becomes the title of a work experience module in Step C1.

Some QDFs find it easier to start with Step B5.1 (Identify the occupational contexts) whilst others find it easier to start with Step B5.2 (Identify work experiences). In essence it is an iterative process that will be taken forward during the development of the work experience module as indicated in Figure 6 below.

When defining the occupational contexts and work experiences, the differences between these and occupational responsibilities and practical skills must be considered. See the note under step B4 (Process 3.3.4.1).



**Figure 7: Linkage between the Occupational Contexts, Work Experiences and Work Activities**

### 3.3.5.1: Step B5.1: Identify the occupational contexts

During Step B5.1 in the process the occupational contexts required for the delivery of each identified product or service are identified.

More than one occupational context can be identified for each product or service, stage in the production cycle or step in the business process. This will specifically be required to allow for exposure to developmental contexts. Provision can also be made for different options, allowing choices between different working contexts.

For each occupational context a work experience module will be developed. The occupational context will be reflected as the title of the work experience module. It must be remembered that each occupational context reflects a number of work experiences and each work experience will again be broken down into a number of work activities as can be seen in Figure 6 above.

**Process Question**

**With regard to each identified product or service, stage in the production cycle or step in the business process, ask:**

- “What are the occupational context/s within which the product or service or occupational responsibilities must be delivered?”
- “What are the key processes that the learner must be exposed to in the workplace?”
- “What are the key physical settings (e.g. above ground, underground, back office) or situations that the learner must be exposed to in the workplace?”
- “Are there any environmental and/or natural resources contexts that the learner must be exposed to?”

**Construction Rules**

- State the process, event or physical setting within a specific context in plural.
- Do not state the context as an activity, e.g. “Maintain mechanical components”.

**Examples**

Fitter and Turner: Routine mechanical component and machine maintenance processes  
Plastics Manufacturing Machine Setter: Machinery and auxiliary equipment set-up processes  
Port Manager: Port or harbour support processes  
Transport Coordinator: Transport scheduling processes

Not this	But rather this
Machinery and auxiliary equipment set-up, start-up and shut-down processes <ul style="list-style-type: none"> <li>• Provides too much detail. Roll up the details (work experiences) into a single statement.</li> </ul>	Machinery and auxiliary equipment set-up processes
Management procedures for ensuring effective and efficient operations of the airport or harbour <ul style="list-style-type: none"> <li>• Describes outcomes, i.e. ...for ensuring effective and efficient operation.</li> <li>• Procedures are too low a level</li> </ul>	Port or harbour support processes
Prepare transport schedules. <ul style="list-style-type: none"> <li>• Describes the activity not the processes</li> </ul>	Transport scheduling processes

### 3.3.5.2: Step B5.2: Identify the work experiences for each occupational context

During Step B5.2 the work experiences required for each occupational context are identified. More than one work experience should be identified for each occupational context.

All work experiences linked to a specific occupational context should be at the same NQF level. This might result in the identification of more occupational contexts to reflect additional levels and allow for building blocks.

It should be noted that some QDFs find it easier to start with this step and then to cluster the work experiences into occupational contexts (see Step B5.1). Either approach is acceptable.

The work experiences relate to those critical aspects that learners must be exposed to or participate in to build their competence to contribute to the output of the work context and that can only be offered in a real workplace where the learner can be exposed to the pressures associated with that type of work.

If there are too many work experiences or if they are at different levels of complexity, it will be necessary to identify additional occupational contexts. On the other hand, if there is only one work experience per context, the identified context is probably only a work experience and not an occupational context.

#### Process Question

With reference to the defined occupational context, ask:

- “What aspects should the learner experience or be exposed to?”
- “What must the learner engage with or participate in during work processes or in the physical setting or situation?”
- “What product or service must the learner produce or deliver?”

#### Construction Rules

The work experiences must follow the sentence: “The learner will be required to:”

- Start with a verb in its simplest form, i.e. without an “s”.
- Then add the “what” (description of the relevant experience) in plural.
- If applicable, add the duration in hours, weeks or months.
- If applicable, add the frequency or number of repeats.

#### Examples

Fitter and Turner:

**Module:** Routine mechanical component and machine maintenance processes

**Work experiences:**

- Assist an experienced artisan to perform routine maintenance on mechanical sub-assemblies and machines for a period of two weeks
- Perform routine maintenance on a range of mechanical sub-assemblies and machines, under supervision, for a period of at least 4 weeks
- Perform routine maintenance of mechanical sub-assemblies and machines autonomously for a period of at least 8 weeks

Plastics Manufacturing Machine Setter

**Module:** Machinery and auxiliary equipment set-up processes

**Work experiences:**

- Observe and assist with start-up and shut-down of machinery and auxiliary equipment over a period of 40 hours
- Start-up and shut-down machinery and auxiliary equipment, under supervision, over a period of 120 hours
- Set-up, start-up and shut-down machinery and auxiliary equipment over a period of 340 hours

Port Manager:

**Module:** Port or harbour support processes

**Work experiences:**

- Review customer service policies and procedures
- Revise airport or harbour infrastructure maintenance services standards, policies and procedures

Transport Coordinator:

**Module:** Transport scheduling processes

**Work experiences:**

- Observe and assist an experienced transport scheduler to develop at least four transport schedules
- Prepare and develop at least four transport schedules under supervision
- Autonomously prepare and develop at least four transport schedules

Not this	But rather this
<p>Start-up and shut-down machinery and auxiliary equipment under supervision, over a period of 120 hours according to company standards</p> <ul style="list-style-type: none"><li>• Reflecting standards, e.g. "... according to company standards" in a workplace context learners would, of necessity, have to comply with company standards.</li></ul>	<p>Start-up and shut-down machinery and auxiliary equipment, under supervision, over a period of 120 hours</p>
<p>Prepare and develop transport schedules</p> <ul style="list-style-type: none"><li>• This describes a work activity and does not provide sufficient guidance to the workplace. There should be some guidance in terms of range duration or frequency</li></ul>	<p>Prepare and develop a variety of different kinds of transport schedules under supervision for a period of at least two weeks OR Prepare and develop at least four transport schedules of various kinds under supervision</p>
<p>Autonomously prepare and develop a transport schedule, signed off by an experience transport scheduler</p> <ul style="list-style-type: none"><li>• One transport schedule is insufficient to develop proficiency. State the "what" in the plural.</li></ul>	<p>Autonomously prepare and develop transport schedules...</p>
<p>Reflecting workplace approval requirements, e.g. under guidance of an experienced...</p>	<p>Just reflect whether under supervision or autonomously.</p>



### 3.3.5.2: Step B5.3: Determine the NQF level of each occupational context

During Step B5.3 the NQF level of each occupational context is determined. This also includes determining the NQF level of each work experience. Where not all work experiences assigned to a specific context reflect the same NQF level, an additional context must be identified for each level.

Each occupational context must be linked to a particular NQF level using the LARF (Level, Activities, Roles, Focus) document. The LARF document is a contextual interpretation of the NQF level descriptors and is used as a guideline for the occupational qualification sub-framework.

The SAQA level descriptors are used and then confirmed by starting with the “Typical activities”, “Role” and “Workplace Focus” columns to determine which description is the most appropriate for the specific occupational context, taking into consideration the associated work experiences supporting it. There should be some degree of correlation between the activities in the LARF and the work experiences.

The following table provides a summary of the LARF, but the complete LARF tool provided in Annexure B to this manual should be used when allocating NQF levels.

Levels	Typical activities	Role	Workplace Focus	Time span of Discretion
10	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession	10-15 years
9	Set and implement strategies	Leading and directing	The 'business landscape' or profession	5-10 years
8	Manage or design systems	Resource management	Policy, resource allocation	3-5 years
7	Manage or design processes	Changed practices	New technology, systems	1-3 years
6	Develop and implement changes	Optimisation	Improvements	6 mth -1yr
5	Maintain efficiencies	Stability and consistency	Systems	3-6 mth
4	Setup processes and solve process problems	Process management	Process data	1-3 mth
3	Adjust, maintain and oversee	Procedures	Productivity	1wk
2	Monitor, support	Operations	Machinery	1day
1	Perform elementary tasks	Tasks	Machines, tools	

#### Process Question

**With regard to each identified occupational context, ask:**

- “Which NQF level should this occupational responsibility be pegged at?”

Examples
<u>Fitter and Turner</u> : Routine mechanical component and machine maintenance processes, NQF Level 3.
<u>Plastics Manufacturing Machine Setter</u> : Machinery and auxiliary equipment set-up processes, NQF Level 4
<u>Port Manager</u> : Airport or Harbour support processes, NQF Level 6.
<u>Transport Coordinator</u> : Transport scheduling processes, NQF Level 4.

### 3.3.6 Step B6: Identify part qualifications and points of external assessment (phase tests)

During Step B6, the identified occupational responsibilities as well as occupational contexts are considered. Combinations of these to be offered as part qualifications or combinations to be evaluated as phase tests must be identified where appropriate.

#### 3.3.6.1 Identify part qualifications

It is important to remember that part qualifications should allow a person to obtain a “job” focusing on a specific area of the occupation and must result in an employable skill set. Therefore each part qualification must have a title which would allow for completion of the sentence “I am a xxxxx”. Part qualifications must constitute modules from all three curriculum components (knowledge, practical skills and work experience). At this point in time the relevant occupational responsibilities and work experiences required for the part qualification must be identified as well as the title. Any part qualification requires a purpose statement (to be finalised during Step B7.3) and a minimum learning contract time of 6.5 weeks, with an assigned credit value of 25 credits, (to be considered during the development of the relevant module specifications during Process 6).

<b>Process Questions</b>	<p><b>With regards to the occupation and/ or the identified occupational responsibilities and occupational contexts, ask:</b></p> <ul style="list-style-type: none"> <li>• “Does this occupation include one or more “jobs” that require recognised qualifications?”</li> <li>• “Would it be possible to construct a part qualification by combining some of the identified responsibilities and contexts?”</li> <li>• “If ‘yes’, what is the best title (I am a xxxx) for a person doing this job?”</li> <li>• “If ‘no’, are there additional contexts or responsibilities that must be added to constitute an employable skill set?” (This will mean the “job” is not a part qualification but a specialisation.)</li> <li>• “What would be the best title (I am a xxxx) to describe a person exiting with this skill set?”</li> </ul>
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Construction rules
<p>Identify a title to best describe the part qualification using “occupational speak” i.e. I am a xxxx (stated in singular form).</p> <p>Every word must start with a capital letter.</p>

Examples
<ul style="list-style-type: none"> <li>• Exhaust Fitter</li> <li>• Wheel Welder</li> </ul>

### 3.3.6.2 Describe points of external assessment (phase tests)

Phase tests might be required due to seasonal or production cycles relating to the specific occupation. It might be necessary to complete phase tests during the course of a period of learning where demonstrated competency is necessary for the learner to proceed to the next level of learning or to access work experience. Phase tests might also be required in terms of legislation pertaining to the occupation.

<b>Process Questions</b>	<p><b>With regards to the occupation/qualification, ask:</b></p> <ul style="list-style-type: none"> <li>• “Are there any intermediate points in the learning process that have to be assessed externally?” (Remember that such a phase test will be a national assessment conducted by an Assessment Quality Partner.)</li> <li>• “Are the occupational tasks in this qualification of a seasonal nature or affected by specific cycles of activity?”</li> <li>• “Could this phase test be structured as an assignment to be assessed externally?” See Step C1.8.</li> </ul> <p><b>With regards to an identified phase test, ask:</b></p> <ul style="list-style-type: none"> <li>• “Why is this phase test necessary?”</li> <li>• “When will the phase test take place?”</li> <li>• “What should be tested?”</li> <li>• “How will the learning programme have to be structured to accommodate this phase test?”</li> </ul>
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Construction rules
<ul style="list-style-type: none"> <li>• Start with “The purpose of this phase test is to determine the learner’s”.</li> <li>• Then add a descriptor such as “competence” or “knowledge” or “ability” followed by a description of what will be assessed.</li> <li>• Then add a reason why the assessment is necessary or the period when the assessment will take place.</li> </ul>

Examples
<ul style="list-style-type: none"> <li>• The purpose of this phase test is to determine the learner’s competence to prune. Assessment will be conducted during July in the pruning season.</li> <li>• The purpose of this phase test is to determine the learner’s knowledge in terms of blasting as required by the mine health and safety regulations as a prerequisite to obtaining a blasting certificate before commencing with the workplace component.</li> </ul>

### 3.3.7 Step B7: Finalise occupational purpose and task statements

#### 3.3.7.1: Step B7.1: Finalise occupational task statements

During Step B7.1 the occupational task statements for the occupation or specialisation are formulated through combining each product or service and its related occupational responsibilities (identified during Steps B3 and B4) and an overall occupational context (from those identified during Step B5). Each occupational task must describe a specific aspect of what occupational practitioners are responsible for delivering in a range of workplaces when qualified. An occupational task is a short statement summarising the full task, i.e. what the person is responsible for doing (at the highest level of complexity) to deliver products or services during production cycles or business processes.

Occupational tasks are similar to functions listed in job advertisements and implicitly build on the concept of being ‘tasked with’, i.e. being ‘responsible for’ delivering in the workplace.

The task statements will be reflected as part of the purpose statement of the qualification to provide an indication of what qualified learners will be able to do. The task statements will also be considered when defining the exit level outcomes during the development of the external assessment specifications document during Process 7, Step D.

Occupational tasks can often be internationally benchmarked and there are seldom more than 8 occupational tasks per occupation.

**Note:** *There are no developmental tasks (i.e. tasks related to developmental responsibilities or outcomes during the learning process).*

#### Process Question

**With regards to each identified product or service and the related occupational responsibilities, ask:**

- “What is the overarching or highest level occupational responsibility that is representative of all the listed occupational responsibilities?”
- “What verb or verbs accurately describe the overarching occupational responsibility?”
- “With regard to the occupational contexts, what are the most defining elements that should be included in the task statement?”

Construction Rules
<ul style="list-style-type: none"> <li>• Start with the highest level responsibilities stated as a verb in its simplest form, i.e. without an “s”.</li> <li>• Then add the product or service.</li> <li>• Then add a defining element of the occupational context where applicable.</li> <li>• Then add the NQF level in brackets.</li> </ul>

Examples
<u>Fitter and Turner</u> : Perform engineering maintenance on mechanical components, subassemblies and machines
<u>Plastics Manufacturing Machine Setter</u> : Set up and run plastics manufacturing machinery and equipment.
<u>Port Manager</u> : Maintain port support operations
<u>Transport Coordinator</u> : Plan and prepare transport schedules

Not this	But rather this
Apply hand skills to fabricate mechanical components using engineering tools. <ul style="list-style-type: none"> <li>• It is not “Hand skills” that are used, but “hand tools”.</li> </ul>	Fabricate mechanical components using hand tools. <ul style="list-style-type: none"> <li>• Reflect the actual task</li> </ul>
Manufacture plastic products <ul style="list-style-type: none"> <li>• The setter does not “manufacture” the machine does that.</li> </ul>	Set up and run plastics manufacturing machinery and equipment <ul style="list-style-type: none"> <li>• Reflect the actual task.</li> </ul>
<u>Perform</u> job analyses and establish job requirements <u>by observing and interviewing employees and managers</u> <ul style="list-style-type: none"> <li>• Use “perform” and “conduct” sparingly,</li> <li>• Explaining how the task is to be done (this will form part of the content in the module)</li> </ul>	Analyse jobs and establish job requirements` <ul style="list-style-type: none"> <li>• Reflect what the person actually has to “do”.</li> </ul>
Generalising the task to such an extent that the uniqueness of the occupation is no longer evident, e.g. “Compile management reports”	Use words and expressions which are unique to that occupation, or qualify generic words with occupational specific modifiers, i.e. augment with indicative objects or activities with instances, e.g. ‘such as’ and ‘by’ or the purpose, e.g. ‘to’. E.g. “Compile management reports on transport statistics”
Reflecting developmental tasks, i.e. reflecting the same product or service in two different tasks, e.g. “Manage the budgetary process....” and “Supervise the budgetary process....”	Only reflect the highest level responsibility as a task, e.g. “Manage the budgetary process....”

Listing all responsibilities (including developmental responsibilities, or outcomes during the learning process) instead of only highest level responsibilities, e.g. “Collect and analyse operational data and statistics, identify potential areas of improvement and compile recommendations....”	Only reflect the highest level responsibilities toward a specific product or service, e.g. “Analyse and report on operational data and statistics ....”
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### 3.3.7.2: Step B7.2: Allocate an NQF Level to each occupational task

During Step B7.2 each occupational task formulated during Step B7.1 is linked to a particular NQF level using the LARF (Level, Activities, Roles, Focus) document.

The LARF document is a contextual interpretation of the NQF level descriptors and is used as a guideline for the occupational qualification sub-framework.

The appropriate NQF level is identified by using the LARF. First the “workplace focus” column is considered to identify which focus descriptor is the most appropriate for the specific task. It is then verified by comparing the “Role” column with the occupational responsibilities reflected in the occupational task. Lastly the “Time span of discretion” is considered in terms of executing the task, e.g. whether the execution or impact of the task plays out over a period of hours, months, years or decades.

There should be some degree of correlation between the activities in the LARF and the responsibilities indicated in the task.

The following table provides a summary of the LARF, but the complete LARF tool provided in Annexure B attached to this manual should be used when allocating NQF levels.

Levels	Typical activities	Role	Workplace Focus	Time span of Discretion
10	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession	10-15 years
9	Set and implement strategies	Leading and directing	The 'business landscape' or profession	5-10 years
8	Manage or design systems	Resource management	Policy, resource allocation	3-5 years
7	Manage or design processes	Changed practices	New technology, systems	1-3 years
6	Develop and implement changes	Optimisation	Improvements	6 mth -1yr
5	Maintain efficiencies	Stability and consistency	Systems	3-6 mth
4	Setup processes and solve process problems	Process management	Process data	1-3 mth
3	Adjust, maintain and oversee	Procedures	Productivity	1wk
2	Monitor, support	Operations	Machinery	1day
1	Perform elementary tasks	Tasks	Machines, tools	

**Process Question**

**With regards to each occupational task, ask:**

- “Which descriptor is best reflected in the task statement?”
- “Does this level truly reflect the complexity of the task?”
- “Is there a better way to reflect the complexity?”

**Examples**

Fitter and Turner: Perform engineering maintenance on mechanical components, subassemblies and machines (NQF Level 3)

Plastics Manufacturing Machine Setter: Set up and run plastics manufacturing machinery and equipment. (NQF Level 4)

Port Manager: Maintain port support operations (NQF Level 6)

Transport Coordinator: Plan and prepare transport schedules (NQF Level 4)

**3.3.7.3: Step B7.3: Finalise purpose statements**

During Step B7.3 the provisional occupational purpose defined during Step B1 is reviewed, aligned and formulated taking into account the occupational task statements finalised during Step B7.1.

The final purpose statement must contain a description of the key responsibility included in the occupation, followed by a summary of the products or services and the range of contexts of the occupation.

The purpose of each part qualification is formalised taking into consideration the developmental (intermediate) occupational responsibilities identified during Step B4.1.

**Process Question**

**For the occupation**

**With reference to the initial occupational purpose, and considering the task statements, ask:**

- “Is this a true reflection of the unique contribution that this occupation makes to or in the labour market?”
- “What are the key products provided or services delivered by a person in this occupation (i.e. the main outputs)?”
- “What are the key defining responsibilities (listed in the task statements) for a person in this occupation?”
- “What are the key context/s of this occupation?”

**For each part qualification**

**Taking into consideration the title, occupational responsibilities and the occupational contexts assigned to the part qualification, ask:**

- “What is the key defining responsibility for a person in this job?”
- “What is the product provided or service delivered by a person in this job?”
- “What is the context of this job?”

Construction Rules
<ul style="list-style-type: none"> <li>• Start with “A” or “An” followed by the actual occupational, specialisation or job title. Each word must start with a capital.</li> <li>• Then add the highest level responsibilities stated as a verb in singular present tense, i.e. with an “s” (to reflect what the person will be responsible for doing).</li> <li>• Then add the product/s or service/s.</li> <li>• Then add a defining element of the occupational context where applicable</li> </ul>

Examples
<p><u>Fitter and Turner:</u> A Fitter and Turner fabricates metal parts and fits, assembles, maintains and repairs mechanical components, sub-assemblies and machines.</p> <p><u>Plastics Manufacturing Machine Setter:</u> A Plastics Manufacturing Machine Setter manufactures plastics products through planning, preparing, setting-up and maintaining optimum machine settings on plastics production equipment.</p> <p><u>Port Manager:</u> A Port Manager plans, organizes, directs, controls and coordinates the operations of an airport or harbour.</p> <p><u>Transport Coordinator:</u> A Transport Coordinator compiles and keeps records of transportation operations and coordinates the timing of passenger services.</p>

**Note 1:** *In the case of the qualification being developed for a specialisation, only the specialisation title must be captured, e.g. not Transport Clerk (the occupation), neither the qualification title, i.e. Transport Clerk (Transport Coordinator) but the actual specialisation, i.e. Transport Coordinator*

Not this	But rather this
<p>A Plastics Manufacturing Machine Setter manufactures plastics products through <u>planning, preparing and setting-up and maintaining optimum machine outputs in various types of volume manufacturing processes.</u></p> <ul style="list-style-type: none"> <li>• Too much detail and convoluted</li> </ul>	<p>A Plastics Manufacturing Machine Setter manufactures plastics products through setting-up and maintaining optimum machine settings on plastics production equipment.</p>
<p>A Transport <u>Clerk</u> compiles and keeps records of operational aspects and coordinates the timing of passenger services <u>in accordance with a schedule, contract and/or private hire,</u> and prepares reports for management.</p> <ul style="list-style-type: none"> <li>• “in accordance with” is detailed information at responsibility and work experience level.</li> <li>• Reporting is a general activity performed by many occupations and is not unique to this occupation.</li> </ul>	<p>A Transport <u>Coordinator</u> compiles and keeps records of transportation operations and coordinates the timing of passenger services.</p>



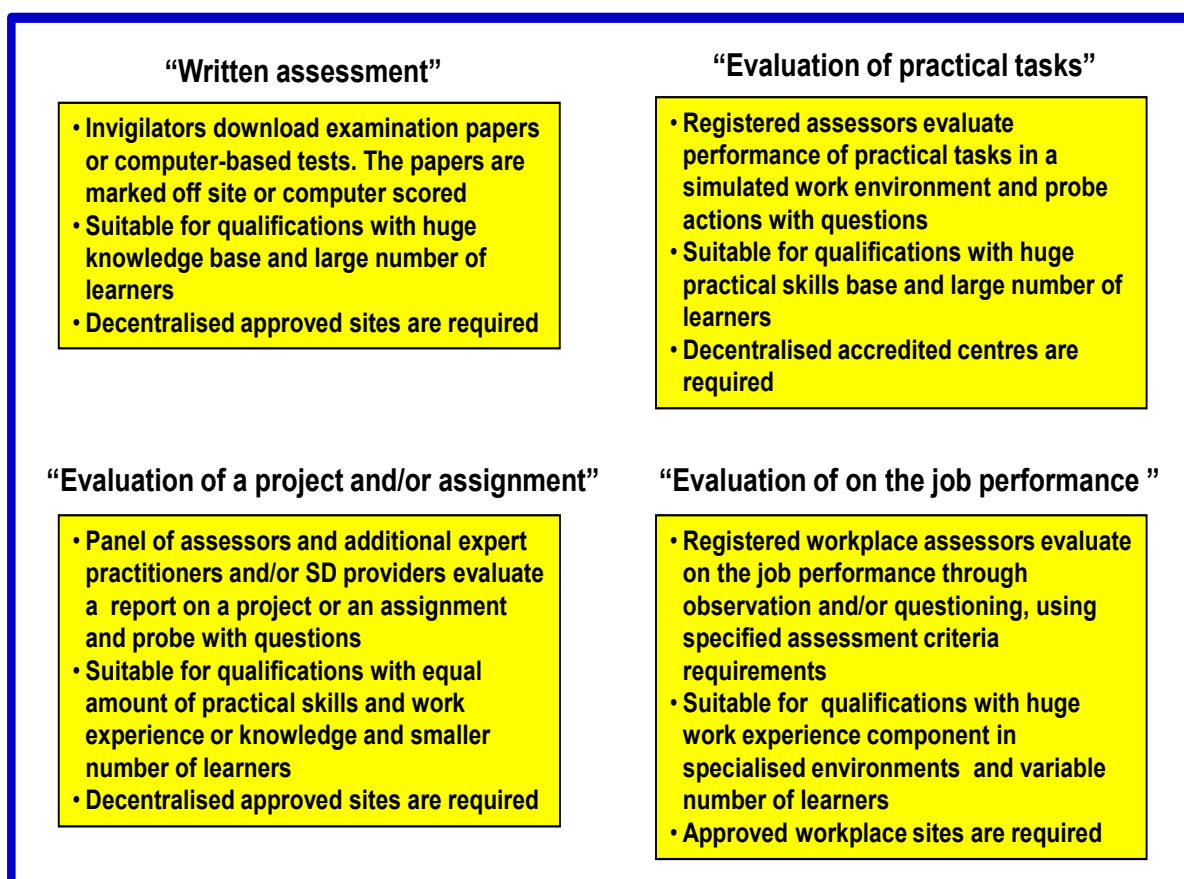
**Note 2:** Any deviation from the initial purpose needs to be considered to ensure that this does not impact on the agreed need and scope that lead to the approval for the development of the qualification.

**Note 3:** The purpose of the occupation or specialisation and the purpose of the part qualification/s should sufficiently differ from one another.

### 3.3.8 Step B8: Identify a proposed external assessment model

During Step B8 the most appropriate model to be used for the external integrated summative assessment is identified.

The four most common models are summarised in Figure 7 below. There are however other possibilities, including combining elements of more than one of these models.



**Figure 8: The four most common models for assessment**

The essence of the proposed model to be used must be recorded in a short paragraph.

**Process Question**

**With reference to the occupational purpose and occupational task statements, ask:**

- “What would be the most appropriate and cost effective way to assess competence?”

### Construction Rules

- Start with the statement “An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.”
- Then add another paragraph by referring to the method, e.g. a written assessment, on the job evaluation, combination of a written test and a practical evaluation, etc.
- Then make reference to where the assessment will happen, e.g. accredited assessment centres, registered assessment sites or at workplaces.
- Then make a reference to who will evaluate the assessment, e.g. registered assessors, invigilators etc and who will be responsible for their registration or appointment.

### Examples

An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.

The assessment will be conducted by means of a written examination at decentralised approved assessment sites and marked by staff appointed by the relevant AQP.

Or

The assessment will include a written phase test at an approved assessment site as well as a final assessment conducted in the workplace and evaluated by an assessor registered with the AQP.

**Note 1:** *In the case of an occupation listed as a trade the following wording must be used: “The external integrated assessment will be conducted through a trade test as prescribed under section 26 D of the Skills Development Act and defined in the Trade Test Regulations. It will be conducted through an evaluation of written and practical tasks covering critical aspects in a simulated environment at an assessment centre accredited by QCTO and conducted by an assessor registered by the National Artisan Moderation Body (NAMB).”*

The assessment model will be circulated during Process 4.2 by the DQP with the occupational profile for verification by stakeholders. It will be reviewed and finalised during the development of the external assessment specifications document (see Process 7, Step D4).

### 3.4 Process 3.4: Identify additional information and compare profile with inputs received from DQP

During Process 3.4 additional information related to the qualification development process is identified and the content of the profile is compared with qualifications identified for consideration for replacement as well as with qualifications and learning programmes identified for consideration as part of international comparability.

### 3.4.1 Process 3.4.1: Identify additional information related to the qualification

Information must be obtained from working group members on:

- Alternative titles used in industry
- Entry requirements

#### 3.4.1.1 Process 3.4.1: Identify alternative titles used in industry

Any alternative titles used by industry for the occupation or specialisation are identified and recorded.

#### 3.4.1.2 Process 3.4.1.2: Identify entry requirements.

Entry requirements can relate to educational requirements and associated years of experience as well as physical and legal entry requirements.

##### Educational entry requirements

This can either be a qualification or specific subjects from one of the other sub-frameworks of the NQF or an entry level occupational qualification that the learner must have obtained prior to enrolling for this qualification.

Tips
Correct nomenclature should be used when indicating requirements for admission e.g. NSC, SC or NC(V) at NQF Level 4 instead of “grade 12”.
The words “equivalent to” may not be used.
Alternatives can be listed, but must be specific, e.g. specific subjects may be specified, e.g. NSC or NC(V) at NQF Level 4, with a pass rate in mathematics.
Years of experience in addition to educational requirements may also be specified. This might be necessary especially where the qualification might be seen as being at too high a level compared to the entry requirements.
Foundational Learning cannot be an entry requirement. It can only be an eligibility requirement for the external integrated summative assessment.
According to feedback from SAQA, no reference should be made to different institutional or provider policies as this is a national qualification. The SAQA criteria for the registration of qualifications should thus be ignored as the interpretation seems problematic.

##### Physical and/ or legal entry requirements

This may include physical or legal registration requirements.

### **3.4.2 Process 3.4.2: Compare profile with inputs received from DQP as part of the brief**

#### **3.4.2.1 Process 3.4.2.1: Identify articulation possibilities**

During Process 3.4.2.1 articulation possibilities are identified for consideration during the development of the module specifications.

Articulation relates to the relationship of qualifications within the Occupational Qualifications Sub-Framework and between the different Sub-Frameworks and covers both horizontal and vertical progression options. Annexure C attached to this manual, together with the Organising Framework for Occupations (OFO) can be used as an input to identify possible occupations at the same and higher NQF levels.

#### **3.4.2.2 Process 3.4.2.2: Establish extent to which identified existing qualifications and qualifications identified for international comparability are covered**

During Process 3.4.2.2, all qualifications (and associated unit standards) identified for possible replacement, as well as qualifications and learning programmes identified for international comparability and received from the DQP during Process 3.2 are considered. Aspects not covered thus far must be brought to the attention of working group members to clarify whether this was intentional or an omission.

Working group members must also be asked whether they are aware of any additional qualifications or learning programmes that might be affected by the development of this qualification or that should be used for the international comparability.

Any additional qualifications or learning programmes identified that might be affected by the development of this qualification must be brought to the attention of the DQP.

### **3.5 Process 3.5: Prepare profile and prepare feedback to the DQP**

During Process 3.5 feedback to the DQP is prepared. The QDF or Learner QDF must provide the DQP with a document that can be circulated to stakeholders for verification. This document can be in word format and must contain the following:

- a) The occupational profile
  - i Occupational purpose  
Starting with “A” or “An” followed by the actual occupation or job title in singular, followed by a verb/s in its simplest form, i.e. without an “s” and then the context/s.
  - ii Occupational tasks  
Starting with a verb in its simplest form, i.e. without an “s”, followed by a product or service and then an occupational context where applicable
    - including an indication of NQF level

- iii Details of each occupational task
  - Product or service (only one per task)
    - Stated as a noun or phrase and can have an adjective but no verb must be used and should not be reflected as something that has been achieved.
    - Knowledge focus areas may be listed
  - Occupational responsibilities (can be more than one per task)
    - Starting with a verb in its simplest form, i.e. without an “s”, followed by a noun/s to describe the product / service or building block.
    - The estimated NQF level must be indicated.
    - Practical skills to be covered should be listed.
  - Occupational contexts (can be more than one per task)
    - Starting with a verb in the present continuous tense, i.e. ending with an “ing”, followed by a description of the relevant experience in plural.
    - The estimated NQF level must be indicated.
    - Work experiences to be covered should be listed.
- b) Alternative titles used by industry for the occupation.
- c) A list of part qualifications, with a title and purpose statement for each, and a list of applicable occupational responsibilities and occupational contexts.
- d) Proposed assessment model and points of external assessment (phase tests).
- e) Information on proposed entry requirements.

## PROCESS 4: MANAGE VERIFICATION OF OCCUPATIONAL PROFILE AND RECOMMENDED AQP

This process consists of:

- Process 4.1 Identify AQP (DQP)
- Process 4.2 Manage verification of occupational profile and recommend AQP (DQP)
- Process 4.3 Integrate comments received on occupational profile and prepare inputs for the Progress Report (QDF)
- Process 4.4 Prepare progress report (DQP)

### 4.1 Process 4.1: Identify AQP (DQP)

Process 4.1 is managed by the DQP. The DQP must identify, communicate with and consult on an appropriate body to fulfil the delegated functions of the AQP.

Such bodies could include:

- Moderating Bodies
- Examining Bodies
- Professional Bodies
- Occupational Associations
- Legislated Boards

**Note 1:** *If none of these bodies with a specific interest in the relevant occupation exists, a SETA or industry body may also fulfil this role, but a provider may not, except under very special circumstances.*

**Note 2:** *The QDF or learner QDF (unless a permanent staff member of the DQP) has no authority to negotiate with potential AQPs and may therefore not perform this function. Any communication regarding the AQP function should go out on the responsible DQP's letterhead clearly indicating that it comes from the QCTO appointed DQP.*

### 4.2 Process 4.2: Manage verification of occupational profile and recommend AQP (DQP)

Process 4.2 is the responsibility of the DQP. The DQP is responsible for the management of this process and must distribute the occupational profile, collect and collate the feedback received and arrange a working group meeting to consider comments.

The DQP must also distribute information on the proposed AQP to stakeholders and provide proof of consultation in this regard to the QCTO in the progress report. This is of particular importance if the DQP is also the recommended AQP.

Once comments have been received the DQP must collate the inputs, provide them to the QDF and arrange a working group meeting to consider inputs.

**Note 1:** *It is not part of the functions of the QDF or learner QDF to distribute the occupational profile for comment or to collate information on feedback received. The QDF (unless a permanent staff member of the DQP) has no authority to communicate with stakeholders. Any communication to stakeholders should go out on the responsible DQP's letterhead clearly indicating that it is the QCTO appointed DQP inviting feedback.*

**Note 2:** *If no suitable body can be identified and the DQP is not able to or willing to perform the functions of the AQP, the verification process must either be delayed or the development process must be terminated. In either case the QCTO, all stakeholders and the QDF must be informed accordingly.*

### **4.3 Process 4.3: Integrate comments received on occupational profile and prepare inputs for the Progress Report**

#### **4.3.1 Process 4.3.1: Integrate comments on occupational profile and prepare a report to the DQP on the process**

During Process 4.3.1, a working group meeting with experts (if required) is facilitated by the QDF to consider the inputs received, make the agreed changes to the occupational profile and prepare a report on how the comments were dealt with.

In addition the QDF or Learner QDF must provide feedback to the DQP on problems experienced, a description and motivation for a change of scope (additional or different specialisations than reflected in the SLA – this might also impact on the rationale) and the extent to which the identified existing qualifications will be replaced.

#### **4.3.1 Process 4.3.1: Formulate rationale statement**

During Process 4.3.1, the rationale statement reflected in the minutes of the scoping meeting and obtained from the DQP during Process 3.2 must be checked and any additional information added.

At this point additional information could have been obtained on related occupations where learners might find employment and the learning pathway where the qualification will reside.

The rationale statement must reflect the following:

- Details of the reasoning that led to identifying the need for the qualification,
  - e.g. new occupation, existing qualifications outdated, classified as a scarce occupation, etc.
- The specific needs that the qualification will meet in the sector for which it is to be developed, including consultation with a recognised professional body or industry body.

- The benefits it will have for society and the economy, for example the range of typical learners and the occupations, jobs or areas of activity in which the qualifying learners will operate, and the contribution to national strategies, where applicable,
  - e.g. reference to the green economy.
- Where applicable, the learning pathway where the qualification will reside in terms of the occupation,
  - e.g. if it is an entry into a specific occupation or a further specialisation to allow for career progression.

**Note 1:** No references should be made to specific years or number of learners.

**Note 2:** The rationale statement must also be reflected in Paragraph 1.1 of the DQP Process report.

**Note 3:** Any changes in scope that impact on the rationale must be highlighted and brought to the attention of the QDF.

#### 4.4 Process 4.4: Prepare progress report (DQP)

The DQP is responsible for preparing the progress report to the QCTO as per the indicated timeline in Schedule 1 – DQP Project Details and Timeframe.

**Note:** The development of this report is the responsibility of the DQP and is not part of the normal functions of the QDF.

The QDF must however ensure that the DQP is notified of:

- a) Any deviations in terms of scope (i.e. exact OFO title and specialisations). See Process 3.3, Step B10
- b) Non- or poor participation of required working group members. See Process 3.3, Step B10
- c) How comments on the occupational profile were dealt with. See Process 4.3.

**Note:** If agreement could not be reached on the body to be recommended as AQP the development process must be terminated. In this case the QCTO, all stakeholders and the QDF must be informed accordingly.

### PROCESS 5: APPOINT THE AQP

This process is managed by the QCTO staff based on the feedback and recommendation from the DQP.



## PROCESS 6: DEVELOP MODULE SPECIFICATIONS

The actual development process is led by the QDF or Learner QDF. The DQP is responsible for communicating with stakeholders, managing the process, and providing administrative support to the QDF or Learner QDF.

This process consists of:

- Process 6.1 Coordinate working group meetings (DQP)
- Process 6.2 Develop module specifications (QDF)
- Process 6.3 Provide additional information to the DQP (QDF)

### 6.1 Process 6.1: Coordinate working group meetings (DQP)

Process 6.1 is the responsibility of the DQP. The DQP must arrange all working group meetings (including the logistics) and ensure sufficient administrative support to the QDF including:

- a) Recordkeeping of attendance (the pre-populated attendance register template attached as Annexure A to this manual must be used);
- b) Ensuring alternates complete their relevant details on the attendance register; and
- c) Monitoring attendance and participation of experts.

**Note 1:** *It is not part of the functions of the QDF or learner QDF to provide administrative support. The QDF (unless a permanent staff member of the DQP) may not send out letters of invitation to stakeholders to participate in working group meetings as they do not have any authority in this regard. Such letters should go out on the responsible DQP's letterhead clearly indicating that it is the QCTO appointed DQP inviting participation.*

**Note 2:** *The QDF must communicate any difficulties to the DQP responsible officer who must arrange to include additional expert practitioners should all sectors not be covered (e.g. for electrician, a qualified electrician from each sector that previously trained electricians should be present to ensure that the new qualification makes provision for all sectors, especially for the practical skills component). For the knowledge component the presence of educators is essential and for the work experience, employers.*

### 6.2 Process 6.2: Develop module specifications

The development of module specifications includes:

- Process 6.2.1 Define the work experience module specifications (Step C1)
- Process 6.2.2 Define the practical skill module specifications (Step C2)
- Process 6.2.3 Define the knowledge module specifications (Step C3)

The figure below provides a graphical illustration of the above mentioned process steps.

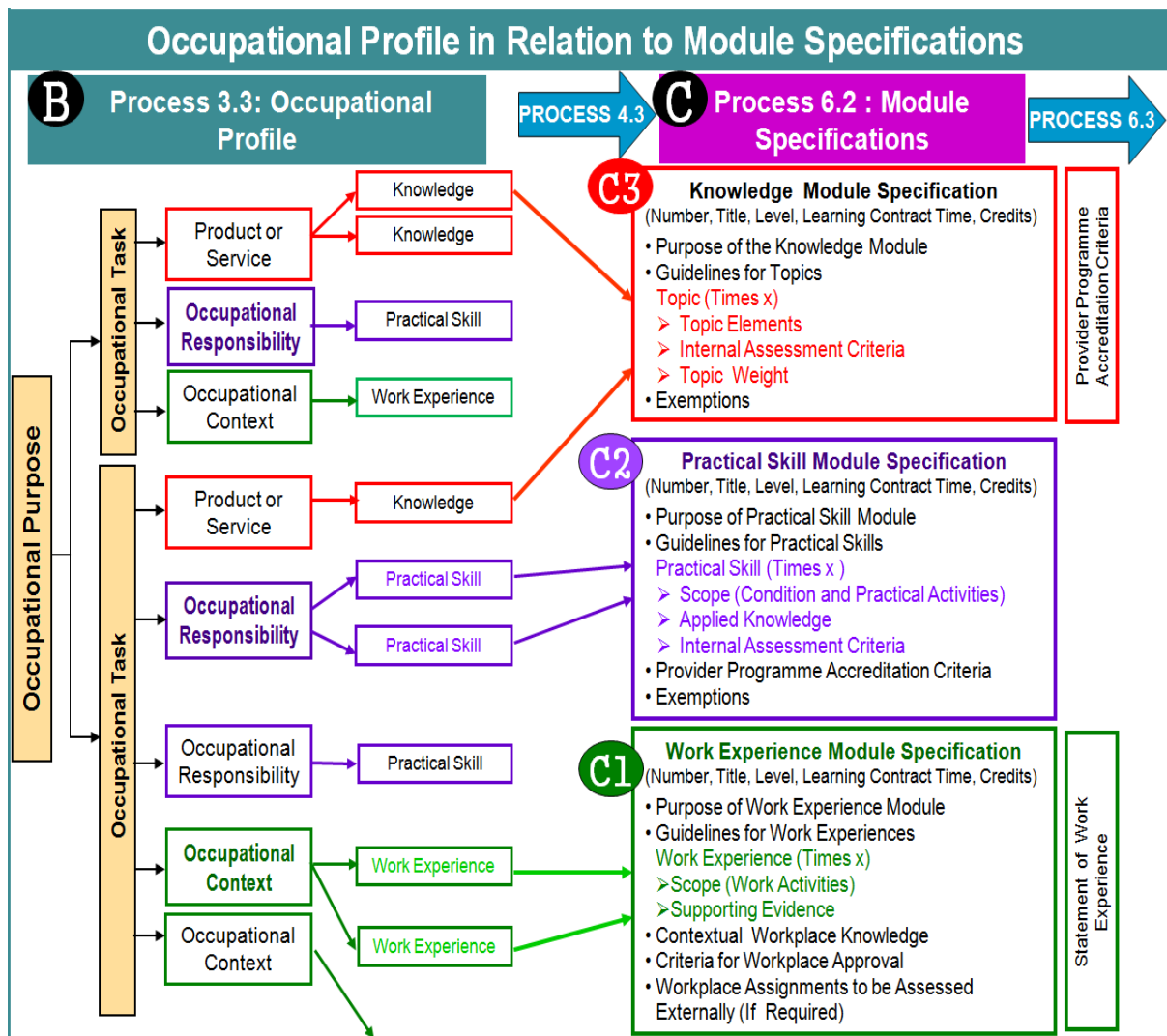


Figure 9: The overall role of the QDF in the development process and the relation between the occupational profile and module specifications

### 6.2.1 Process 6.2.1: Define the work experience module specifications (Step C1)

Work experience module specifications reflect the required exposure and interactions that integrate knowledge, skills and attitudes in the workplace. Work experience includes the required practice to become proficient and acquire contextual knowledge relating to the specific working environment.

There is one work experience module specification for each occupational context and it has the same title as the occupational context as identified during Step B5.

The purpose of work experience module specifications is to describe the content of each work experience module in terms of scope (work activities to be covered) and the contextual knowledge to be covered by the learner while in the workplace to provide him/her sufficient opportunity to become competent in the relevant occupation. The work experience modules therefore cover a range of contextual variables which commonly occur in the occupational setting. Such contextual variables include the range of information, people, tools and equipment with which the learner must engage as well as the settings or circumstances in which the learner must function. Work experience module specifications must be carefully constructed to ensure that supervisors and managers in an approved workplace are quite clear as to the kinds of experiences and activities the learner must be exposed to.

Work experience module specifications are developed by experts and can only be acquired in an actual working environment.

The development of the work experience module specifications includes eight steps:

- STEP C1.1 Define the scope of each work experience
- STEP C1.2 Identify supporting evidence of performance
- STEP C1.3 Identify the contextual workplace knowledge for the work experience module
- STEP C1.4 Formulate the purpose of the work experience module
- STEP C1.5 Determine the learning contract time and allocate a credit value to the work experience module
- STEP C1.6 Determine the NQF level for the work experience module
- STEP C1.7 Specify the criteria for approval of workplaces
- STEP C1.8 Specify workplace assignments to be assessed externally (if any)

After all work experience module specifications have been developed the occupational qualification capturing tool will generate a statement of work experience.

The figure below provides a graphical illustration of the above mentioned process steps.

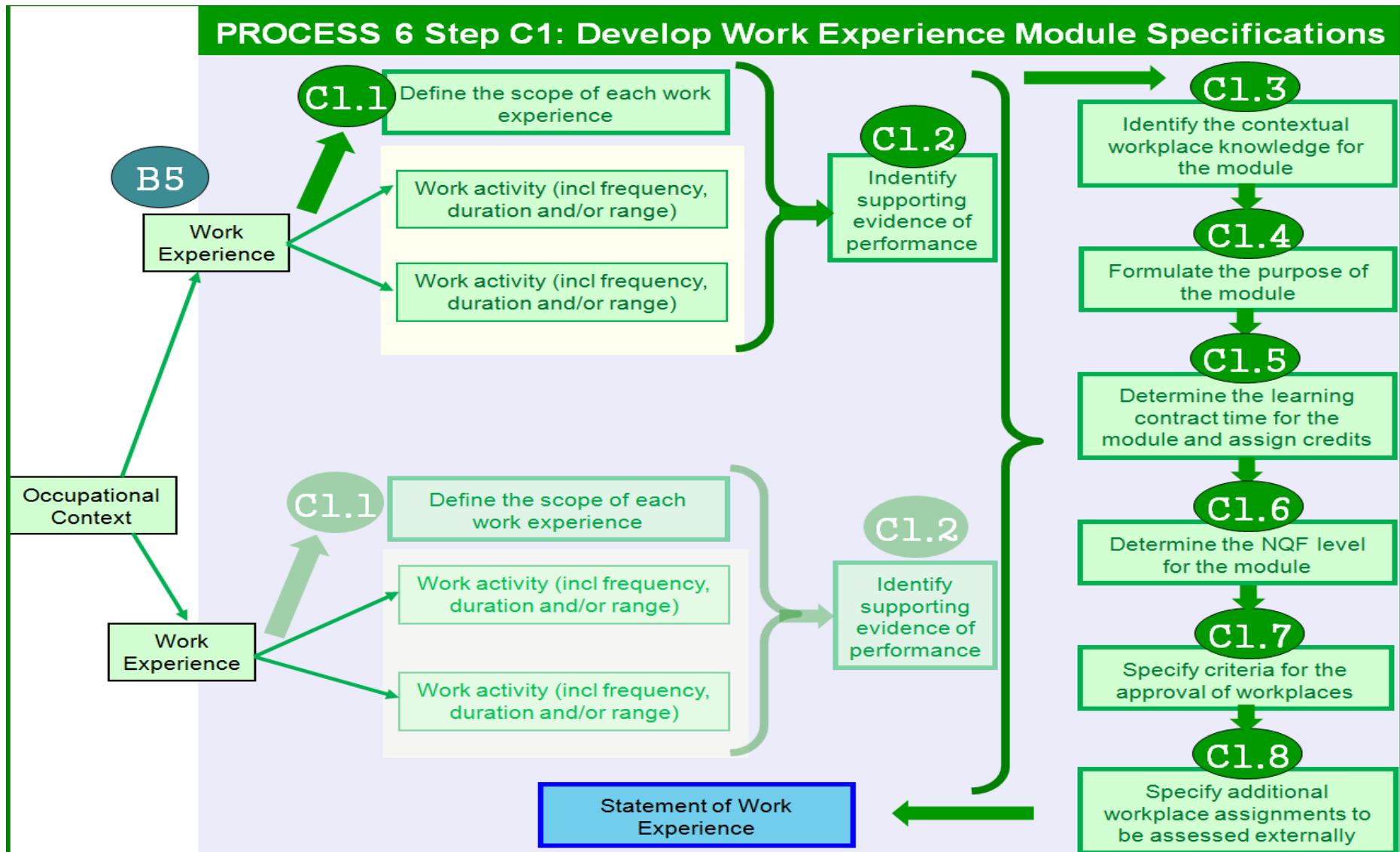
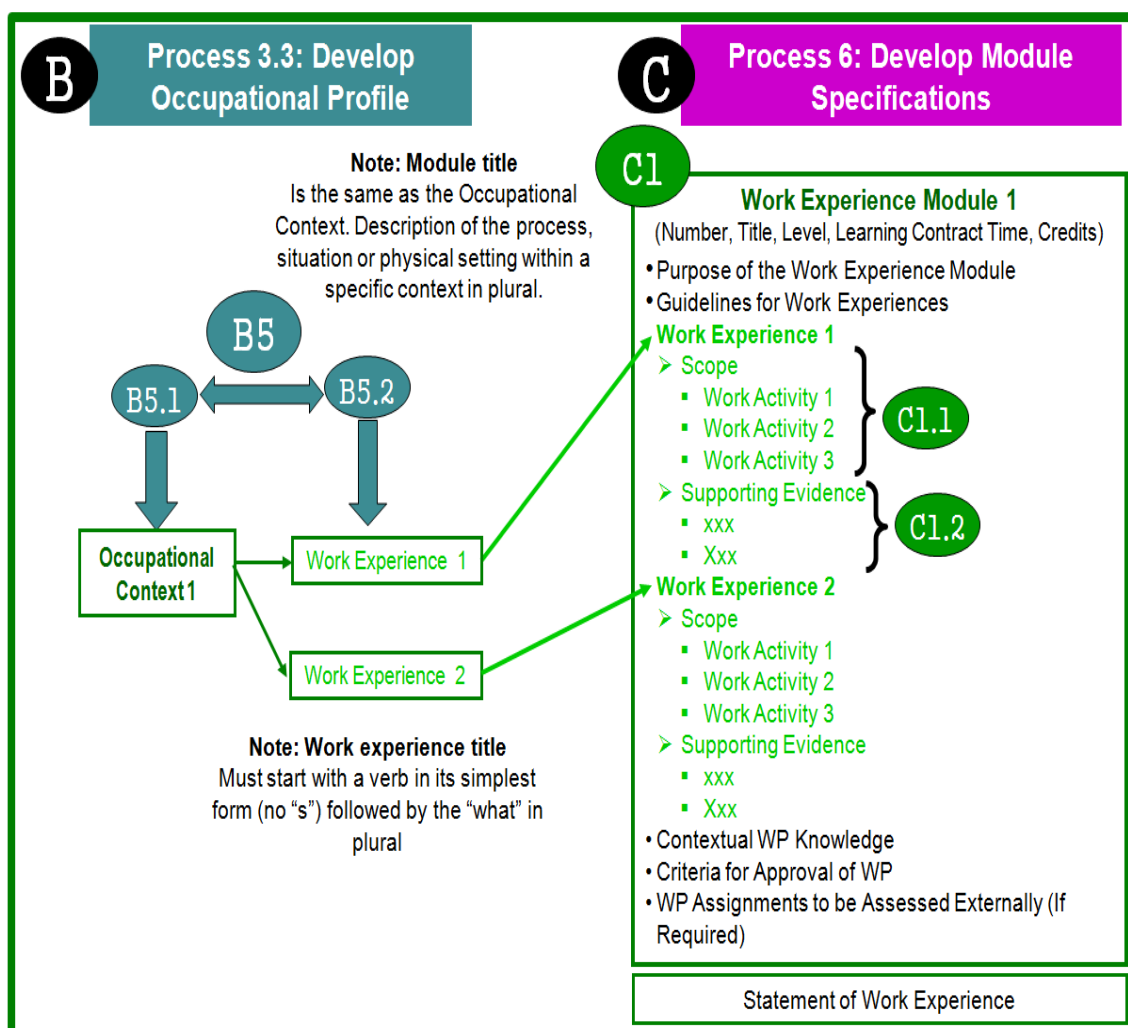


Figure 10: Steps for developing the work experience module specifications

The content and structure of a work experience module is outlined below.



**Figure 11: Steps for developing the work experience module specifications**

### 6.2.1.1 Step C1.1: Define the scope of each work experience

During Step C.1, for each work experience identified during Step B5.2, the scope (associated work activities) is identified.

In preparation for this step, it will be necessary to compare the already identified work experiences with the information received from the DQP during Process 3.2. This includes comparing the content covered in the identified related qualifications on national or regional qualification frameworks and other occupational development processes elsewhere in the world (for international comparability) as well as qualifications and part qualifications registered on the NQF (to determine replacement and exemptions). If applicable, possible additional work experiences can be identified and brought to the attention of the working group for consideration.

The scope of each of the work experiences is defined by identifying work activities (the range of objects, situations and/or circumstances that the learner must be

exposed to). The frequency (number of times), time duration or range required for activities must also be reflected, if required. There should be more than one work activity for each work experience.

The work activities will also appear in the statement of work experience to be signed off and confirmed by an employer (supervisor) after completion by the learner.

#### Process Question

**With reference to existing qualifications as well as the work experiences identified during Step B5.2, ask:**

- “Are there any additional work experiences that must be addressed?”

**With reference to each work experience, ask:**

- “What activities must the learner perform to obtain the necessary experience?”
- “What objects or situations must the learner be exposed to?”
- “What circumstances would a person in this occupation deal with?”
- “What information, tools, equipment or systems would a person in this occupation work with?”
- “What is the frequency (number of times) or time duration required (where applicable)?”

#### Construction rules

The work activities must be able to follow the sentence: “The person will be expected to engage in the following work activities:”

**List all the related work activities and for each:**

- Indicate what the person will be expected to do, starting with a verb (present tense in its simplest form, i.e. verb without an “s”).
- Then state the frequency (number of times), time duration or range of the activity, if required
- Add a description of the “what” in plural.

#### Examples

Fitter and Turner:

**Module:** Routine mechanical component and machine maintenance processes

**Work experience:** Perform routine maintenance on a range of mechanical sub-assemblies and machines under supervision on at least 5 of the following: gearboxes, pumps, brakes, clutches, drives, valves, bearings, lubrication systems, hydraulic systems, pneumatic systems

**Work activities:**

- Inspect and prepare the work sites
- Implement safety precautions including hazard identification and risk assessment, lock and tag out, selecting and using appropriate personal protective equipment
- Perform a range of routine maintenance tasks of varying complexity on at least 5 of the following: gearboxes, pumps, brakes, clutches, drives, valves, bearings, lubrication systems, hydraulic systems, pneumatic systems
- Interact with production personnel and report on routine maintenance

Plastics Manufacturing Machine Setter

**Module:** Machine and auxiliary equipment set-up processes

**Work experience:** Set-up, start-up and shut-down machinery and auxiliary equipment over a period of 340 hours

**Work activities:**

- Start-up machinery and auxiliary equipment
- Shut-down machinery and auxiliary equipment
- Set up and programme a variety of machines and auxiliary equipment
- Plan, prepare for and perform materials and colours change-over
- Monitor manufacturing processes for a variety of plastic products and adjust settings as required

Port Manager:

**Module:** Airport or harbour support processes

**Work experience:** Port infrastructure maintenance services standards, policies and procedures

**Work activities:**

- Participate in the review and revision of standard operating procedures for maintenance of infrastructure
- Compile or revise predictive and preventative maintenance plans
- Compile or revise maintenance schedules for equipment, infrastructure and facilities
- Compile a report on issues, revisions and contributions made to the compilation or revision of the documents

Transport Coordinator:

**Module:** Transport scheduling processes

**Work experience:** Prepare and develop transport schedules

**Work activities:**

- Obtain relevant documentation and tools at the point of use
- Perform an on-site risk analysis for each trip
- Compile at least four transport schedules

Not this	But rather this
Inspect and prepare the work site <ul style="list-style-type: none"><li>• Stating the “what” in singular form as doing a thing once is insufficient to develop the skill.</li></ul>	Inspect and prepare the work sites
Start-up machinery and auxiliary equipment according to company standards <ul style="list-style-type: none"><li>• Do not add performance standards, e.g. “according to company standards”. Workplaces expect work to be done according to their standards.</li></ul>	Start-up machinery and auxiliary equipment
Compile predictive and preventative maintenance plans <ul style="list-style-type: none"><li>• This is an unlikely task to be allocated to a learner. Nor are all learners likely to be exposed to the compiling of such a document. This would occur only if there happened to be something new at the very time the learner was there.</li></ul>	Participate in the compiling or revision of predictive and preventative maintenance plans

### 6.2.1.2 Step C1.2: Identify supporting evidence of performance

During Step C1.2 evidence (generally in the form of documents) that is or can be generated during work experience activities is described. This evidence can be used to validate the learner’s participation in the required workplace activities and to measure the learner’s ability to perform to the standards of the workplace. This can be seen as naturally occurring workplace evidence that supervisors, managers and coaches must use to evaluate the competence of learners as there will be no requirement for learners to put together a portfolio of evidence.

#### Process Questions

**With reference to the specific work experience and associated work activities, ask:**

- “What is the naturally occurring workplace evidence or source of evidence that will indicate that the learner has competently executed the full scope of work activities?”
- “What in the evidence will indicate the standard of performance?”

#### Supporting Evidence

Capture the supporting evidence identified during Step C1.2.

Construction rules
<ul style="list-style-type: none"> <li>• List the documents containing the relevant evidence.</li> <li>• Provide an appropriate quality indicator to reflect the standard of performance, where required</li> </ul>

Examples
<p><u>Fitter and Turner:</u>  <b>Module:</b> Routine mechanical component and machine maintenance processes  <b>Work experience:</b> Perform routine maintenance of a range of mechanical sub-assemblies and machines under supervision  <b>Supporting evidence:</b></p> <ul style="list-style-type: none"> <li>• Signed-off job cards</li> <li>• Non-conformance reports</li> <li>• Workplace logbook or portfolio</li> <li>• Equipment downtime records</li> </ul> <p><u>Plastics Manufacturing Machine Setter</u>  <b>Module:</b> Machinery and auxiliary equipment set-up processes  <b>Work experience:</b> Set-up, start-up and shut-down machinery and auxiliary equipment over a period of 340 hours  <b>Supporting evidence:</b></p> <ul style="list-style-type: none"> <li>• Shift reports</li> <li>• Non-conformance reports</li> </ul> <p><u>Port Manager:</u>  <b>Module:</b> Maintenance processes for airport and harbour operations  <b>Work experience:</b> Airport or harbour support processes  <b>Supporting evidence:</b></p> <ul style="list-style-type: none"> <li>• Signed off predictive and preventive maintenance plans</li> <li>• Signed off equipment, infrastructure and facility maintenance schedules</li> </ul>



Transport Coordinator:

**Module:** Transport scheduling processes

**Work experience:** Prepare and develop transport schedules

**Supporting evidence:**

- Approved transport plans signed by the learner and the qualified person on record
- Completed risk assessment checklists signed by the learner and the qualified person on record

Not this	But rather this
Shift report There should be a history of shift reports for the duration of the work experience or for the number of repetitions.	Shift reports
Standard Operating Procedure This is a company document it does not contain any evidence of work done by the learner.	Completed checklists OR Maintenance reports

### 6.2.1.3 Step C1.3: Identify the contextual workplace knowledge for the work experience module

During Step C1.3 the contextual workplace knowledge required for the entire work experience module (i.e. all the work experiences and associated work activities) is identified. Contextual workplace knowledge includes knowledge of specific strategies, brands, products, protocols and procedures.

This knowledge can only be acquired in the workplace, or from suppliers or in-house trainers.

#### Process Questions

**With regards to each work experience and associated work activities ask:**

- “What specific workplace or organisational knowledge can only be acquired in the workplace to deliver the company or industry specific product/service?”
- “What are the standard operating procedures, codes of conduct, organisational or product/service specific strategies and brand specific knowledge that can only be acquired in the workplace, or from suppliers or in-house trainers?”
- “What are the specific health, safety or environmental requirements related to the working context?”

#### Construction rules

- List the specific knowledge and information required to meaningfully engage in the occupational context.

## Examples

### Fitter and Turner:

**Module:** Routine mechanical component and machine maintenance processes

**Contextualised workplace knowledge:**

- Workplace Hazard Inspection and Risk Assessment procedures
- Material request and storage procedures
- Equipment handling and storage procedures
- Standard operating procedures
- Original Equipment Manufacturers' manuals and specifications

### Plastics Manufacturing Machine Setter

**Module:** Machinery and auxiliary equipment set-up processes

**Contextualised workplace knowledge:**

- Organisational policies, procedures and work instructions
- Manufacturer's machine manuals
- Material safety data sheets
- Product specifications and related quality data

### Port Manager:

**Module:** Airport or harbour support processes

**Contextualised workplace knowledge:**

- Company specific policies and related standard operating procedures
- Manufacturers' maintenance documents and specifications
- Facility maintenance standards, plans and schedules

### Transport Coordinator:

**Module:** Transport scheduling processes

**Contextualised workplace knowledge:**

- Company specific policies and procedures
- Company specific quality management system requirements
- Relevant statutory requirements: Not limited to Occupational Health and Safety Act, Road Transport Acts, Traffic regulations
- Relevant ISO standards
- Relevant SANS standards
- Manufacturers' specifications

Not this	But rather this
ISO standards <ul style="list-style-type: none"> <li>• This is too broad</li> </ul>	Relevant ISO standards
Including reference number of Acts (these might change)	
Referring to <u>sources</u> of knowledge instead of referring to knowledge, i.e. " <i>Qualifications development process manual</i> "	

#### 6.2.1.4 Step C1.4: Formulate the purpose of the work experience module

During Step C1.4 the purpose statement is formulated to give a quick overview of what the learner will be expected to engage with and participate in during placement in the workplace in order to achieve competence with regard to the relevant module. The purpose statement is a brief description of the core focus of the learning and the critical aspects that must be covered by a learner during completion of the module.

The statement formulated must complete the sentence: “The focus of the learning in this module is on providing the learner an opportunity to:”

The second part of the purpose relates to what the learner will be required to do during completion of this module. The occupational qualification capturing tool populates this part by listing the different work experiences (generated during Step B5.2 and expanded during Step C1.1).

**Note:** *The purpose statement together with the work experiences must provide guidance in terms of work place approval requirements.*

#### Process Question

With reference to the module title (occupational context) and the list of work experiences covered by the module, ask:

- “What will the learner be required to do in the workplace?”
- “Which aspects or which conditions of the work process will contribute towards the development of the required competence?”

#### Construction rules

The purpose statement must complete the sentence. “The focus of the work experience is on providing the learner an opportunity to.....”

- Start with a verb in small letters and in its simplest form, i.e. without an “s” to summarise the intended outcome of the module.
- Then specify the reason by adding what must be done or achieved.
- Then if required include contexts at high level.

#### Examples

Fitter and Turner:

**Module:** Routine mechanical component and machine maintenance processes

**Purpose:** *The focus of the work experience is on providing the learner an opportunity to gain exposure to and experience of the typical maintenance requirements and maintenance processes for various types of mechanical equipment.*

Plastics Manufacturing Machine Setter:

**Module:** Machinery and auxiliary equipment set-up processes

**Purpose:** *The focus of the work experience is on providing the learner an opportunity to set-up a variety of machinery and auxiliary equipment for a range of products.*

Port Manager:

**Module:** Airport or Harbour support processes

**Purpose:** *The focus of the work experience is on providing the learner an opportunity to work in various operational support environments observing, assisting, and contributing work under supervision of senior staff with at least 2 years' experience.*

Transport Coordinator:

**Module:** Transport scheduling processes

- **Purpose:** *The focus of the work experience is on providing the learner an opportunity to gain exposure to working as part of a team in developing transport schedules within a real life transport environment.*

Not this	But rather this
<p>... gain exposure to working as part of a team in developing transport schedules within a real life transport environment. The learner will be required to complete each work experience at least four (4) times</p> <ul style="list-style-type: none"><li>• Include the repetitions or duration in the work experience and not the purpose statement. The latter is not included in the Statement of Work Experience and thus the person signing off will not be able to sign off this requirement.</li></ul>	<p>... gain exposure to working as part of a team in developing transport schedules within a real life transport environment.</p>
<p>... set-up machinery and auxiliary equipment</p> <ul style="list-style-type: none"><li>• Do not simply state the purpose as an activity.</li><li>• Provide the workplace with guidance about the range and scope of the activity.</li></ul>	<p>... set-up a variety of machinery and auxiliary equipment for a range of products.</p>
<p>Stating the obvious, e.g. "in a real life environment" Or "under supervision of knowledgeable staff"</p>	

### 6.2.1.5 Step C1.5: Determine learning contract time and allocate a credit value to the work experience module

During step C1.5 the learning contract time is determined. The learning contract time constitutes the total amount of time during which the learner needs to have access to the workplace and workplace supervisors and coaches to enable him or her to experience the range of work activities and acquire the knowledge and understanding specified. It includes time required to gain the specified exposure and for completing the activities, assignments and research (if any), as well as the time required to acquire the contextual knowledge. The learning contract time can be specified in days, hours or weeks.

One credit equals ten notional hours of learning and each learning contract day constitutes eight hours of learning. To calculate the credits, each day is multiplied by 0.8 to reflect notional hours of learning.

Hours	Days	Weeks	Actual Credit value	Credit value to be assigned
8	1		0,8	1
	2		1,6	1,5
	3		2,4	2,5
	4		3,20	3
	5	1	4	4

### Process Questions

Review each of the work experiences and ask:

- “How many hours/ days/weeks must be allocated for the learner to complete the full scope of work activities described in the module?”

#### Construction rules

- Capture the learning contract time for the module in hours, days or weeks.
- Capture the associated credit value based on the principle that 10 notional hours of learning is equivalent to 1 credit.

#### Examples

Fitter and Turner: Routine mechanical component and machine maintenance processes, 40 Credits (Learning contract time 50 days)

Plastics Manufacturing Machine Setter: Machinery and auxiliary equipment set-up processes, 50 Credits (Learning contract time 62,5 days)

Port Manager: Airport or Harbour support processes, 5, 4 Credits (Learning contract time 5 days)

Transport Coordinator: Transport scheduling processes, 10 Credits (Learning contract time 12,5 days)

### 6.2.1.6 Step C1.6: Determine the NQF level of the work experience module

During Step C1.6 the NQF level assigned to each occupational context (see Step B5.3) is considered.

Each Work Experience Module is linked to a particular NQF level using the LARF (Level, Activities, Roles, Focus) as the modules focus on actual work that needs to be done. The LARF document is a contextual interpretation of the NQF level descriptors and is used as a guideline for the occupational qualification sub-framework.

The SAQA level descriptors are used and then confirmed by starting with the “Typical activities”, “Role” and “Workplace Focus” columns to determine which description is the most appropriate for the specific work experience module, taking into consideration the purpose, associated work experiences, work activities and supporting evidence covered by the module. There should be some degree of correlation between the activities in the LARF and the content of the module.

The following table provides a summary of the LARF, but the complete LARF tool provided in ANNEXURE B of this manual should be used when allocating NQF levels.

Levels	Typical activities	Role	Workplace Focus	Time span of Discretion
10	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession	10-15 years
9	Set and implement strategies	Leading and directing	The 'business landscape' or profession	5-10 years
8	Manage or design systems	Resource management	Policy, resource allocation	3-5 years
7	Manage or design processes	Changed practices	New technology, systems	1-3 years
6	Develop and implement changes	Optimisation	Improvements	6 mth -1yr
5	Maintain efficiencies	Stability and consistency	Systems	3-6 mth
4	Setup processes and solve process problems	Process management	Process data	1-3 mth
3	Adjust, maintain and oversee	Procedures	Productivity	1wk
2	Monitor, support	Operations	Machinery	1day
1	Perform elementary tasks	Tasks	Machines, tools	

#### Process Question

**With regard to the entire workplace module, ask:**

- “What NQF Level should be assigned to this module?”
- “Does the content of the module reflect the NQF level allocated to the occupational context during Step B5.3 (Process 3.3.5.2)?”

#### Examples

Fitter and Turner: Routine mechanical component and machine maintenance processes, NQF Level 3.

Plastics Manufacturing Machine Setter: Machinery and auxiliary equipment set-up processes, NQF Level 4

Port Manager: Airport or Harbour support processes, NQF Level 6.

Transport Coordinator: Transport scheduling processes, NQF Level 4.

#### 6.2.1.7 Step C1.7: Define the criteria for the approval of workplaces

During Step C1.7, guidelines for the approval of workplaces to offer the work experience module are defined.

The criteria are in relation to the human resource, physical and legal requirements that must be met by the workplace in order to ensure that learners will gain exposure to the required tools, equipment, systems, processes conditions and interfaces.

## Process Questions

Review the total work experience module specification and ask:

- “In order to ensure that learners will have access to all work experiences and can participate in all work activities, what physical resources and processes should the workplace provide?”
- “In order to properly supervise the execution of all the defined work activities, what human resource requirements must the workplace meet?”
- “In order to execute the defined work activities in a safe and compliant manner, which legal requirements must the workplace meet?”

### Construction Rules

- List the critical categories of physical requirements in terms of:
  - Tools
  - Equipment
  - Systems
  - Key processes
- List the human resources requirements in terms of:
  - Qualifications, registration or experience of supervisors
  - Supervisor subordinate ratios
  - Availability of coaches and mentors
- List the legal requirements in terms of compliance with:
  - Legislation limited to legislation related to licensing.

**Note 1:** Reference to legal requirements should only be made where applicable.

**Note 2:** Only specify legal requirements if absolutely necessary. General prescriptions, such as ISO quality standards or BBEED level 1 status, may make it difficult for small and micro businesses to comply.

### Examples

#### Physical Requirements

*Tools, equipment, systems, e.g.:*

- Access to an operational airport with passenger amenities, check-in facilities, baggage handling, passenger processing, customs/immigrations, boarding, disembarking, security and safety.
- Access to a computer, company systems, documents, data and relevant meetings.

*Key processes, e.g.:*

- Raw materials receiving and stockpiling (Rail and road transport of material).
- Company strategy development and review meetings and processes.

#### Human Resources Requirements

- Maximum supervisor/worker ratio of 1:25.
- A qualified metallurgist on site who is involved in the production process.

#### Legal Requirements

- Compliance with all occupational health and safety standards.
- Company systems and procedures conform to relevant SANS standards.

### 6.2.1.8 Step C1.8: Specify Additional Workplace Assignments to be Assessed Externally

During Step C1.8 workplace assignments that must be completed whilst at the workplace and that must be assessed externally as part of the integrated external summative assessment are specified (if required).

Work experience is normally not assessed externally; however, in some instances the learner may have to complete a specific assignment or project while at the workplace and submit the outcome for external evaluation. In such cases the specific assignment or project must be described (what the learner must do and what elements are to be covered) and the criteria that will be used for the evaluation thereof specified. Such an assignment may include evidence of particular work activities, e.g. planning of and outcomes related to a continuous improvement project.

All workplace assignments listed in the work experience module specifications including the associated assessment criteria thereof will also be reflected in the assessment specifications to be evaluated over and above the exit level outcomes.

#### Process Questions

**Review the total work experience module and ask:**

- “Are there any specific assignments that should be evaluated externally?”
- “What are the elements to be evaluated and the criteria for evaluation thereof?”

### 6.2.1.9 The Statement of work experience

The occupational qualification capturing tool generates a pro forma statement of work experience that summarises all work experience modules. The purpose of the statement of work experience is to prove that all requirements of the work experience have been met. A signed copy thereof will be required to qualify for the external summative assessment.

### 6.2.2 Process 6.2.2: Define the practical skill module specifications (Step C2)

Practical skill module specifications reflect the learning tasks which prepare a learner to perform occupational responsibilities safely and accurately. Practical skills are more than just the following of rule based actions and include practical / applied knowledge.



There is one practical skill module specification for each occupational responsibility and it has the same title as the occupational responsibility as identified during Step B4.

The purpose of practical skill module specifications is to describe the content of each practical skill module in terms of the scope (condition and practical activities) and the applied knowledge to be covered in the training as well as the assessment criteria thereof. The practical skill module must prepare the learner to operate safely and/or accurately in the actual working environment (so as not to cause damage to people, equipment, systems and the business). The practical skill module specifications must be carefully constructed to ensure that accredited skills development providers are quite clear as to what the learners must learn and practise.

Practical skills module specifications are developed by experts and are mostly offered in a safe, simulated environment (such as a workshop) where learners can develop the specified skills in preparation for actual work.

The development of the practical skills module specifications includes nine steps:

- STEP C2.1 Define the scope of each practical skill
- STEP C2.2 Identify the applied knowledge for each practical skill
- STEP C2.3 Define the internal assessment criteria for each practical skill
- STEP C2.4 Formulate the purpose of the practical skills module
- STEP C2.5 Determine learning contract time and allocate a credit value to the practical skills module
- STEP C2.6 Determine the NQF level of the practical skill module
- STEP C2.7 Specify the provider programme accreditation criteria for the module
- STEP C2.8 Identify exemptions

The figure below provides a graphical illustration of the above mentioned process steps.

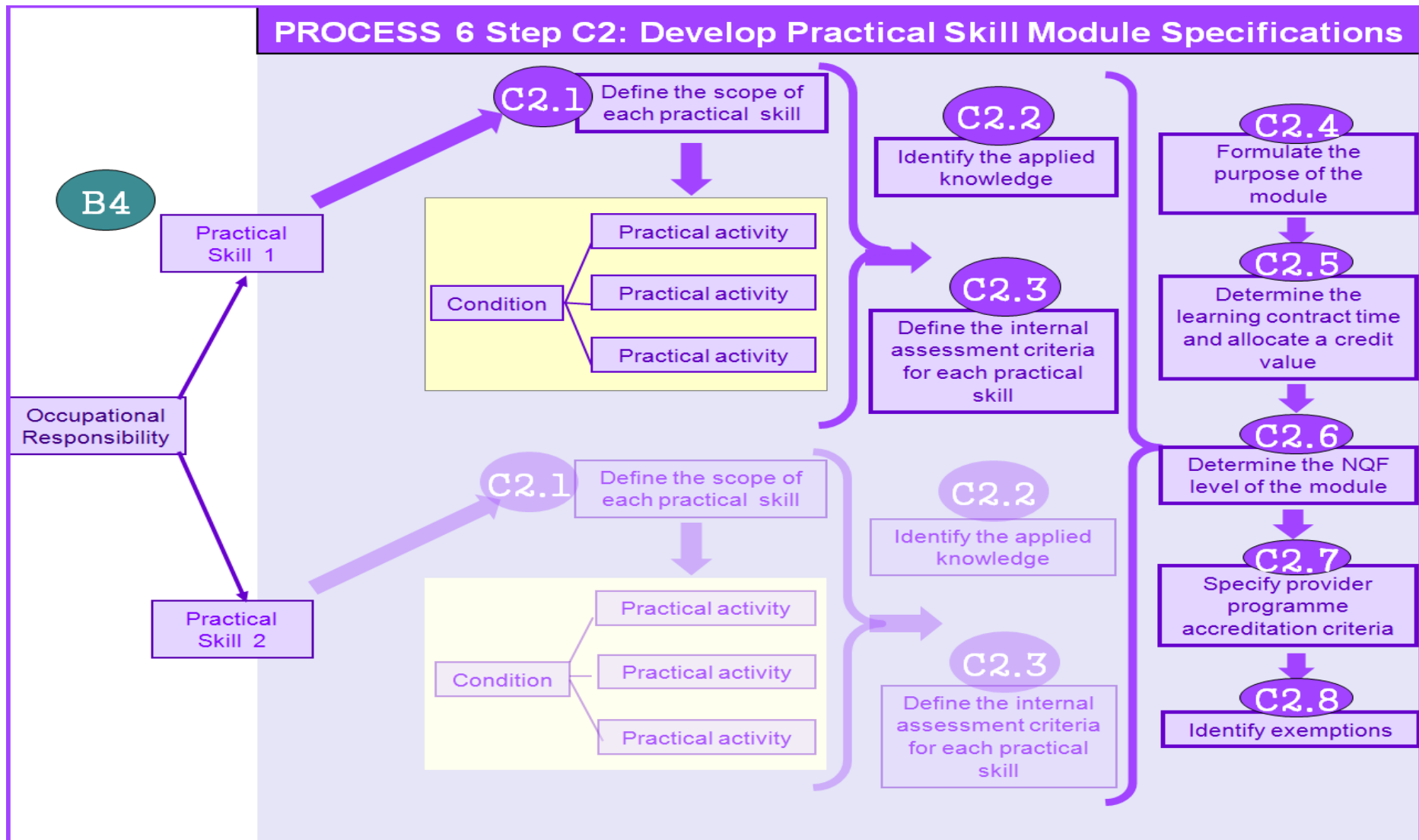
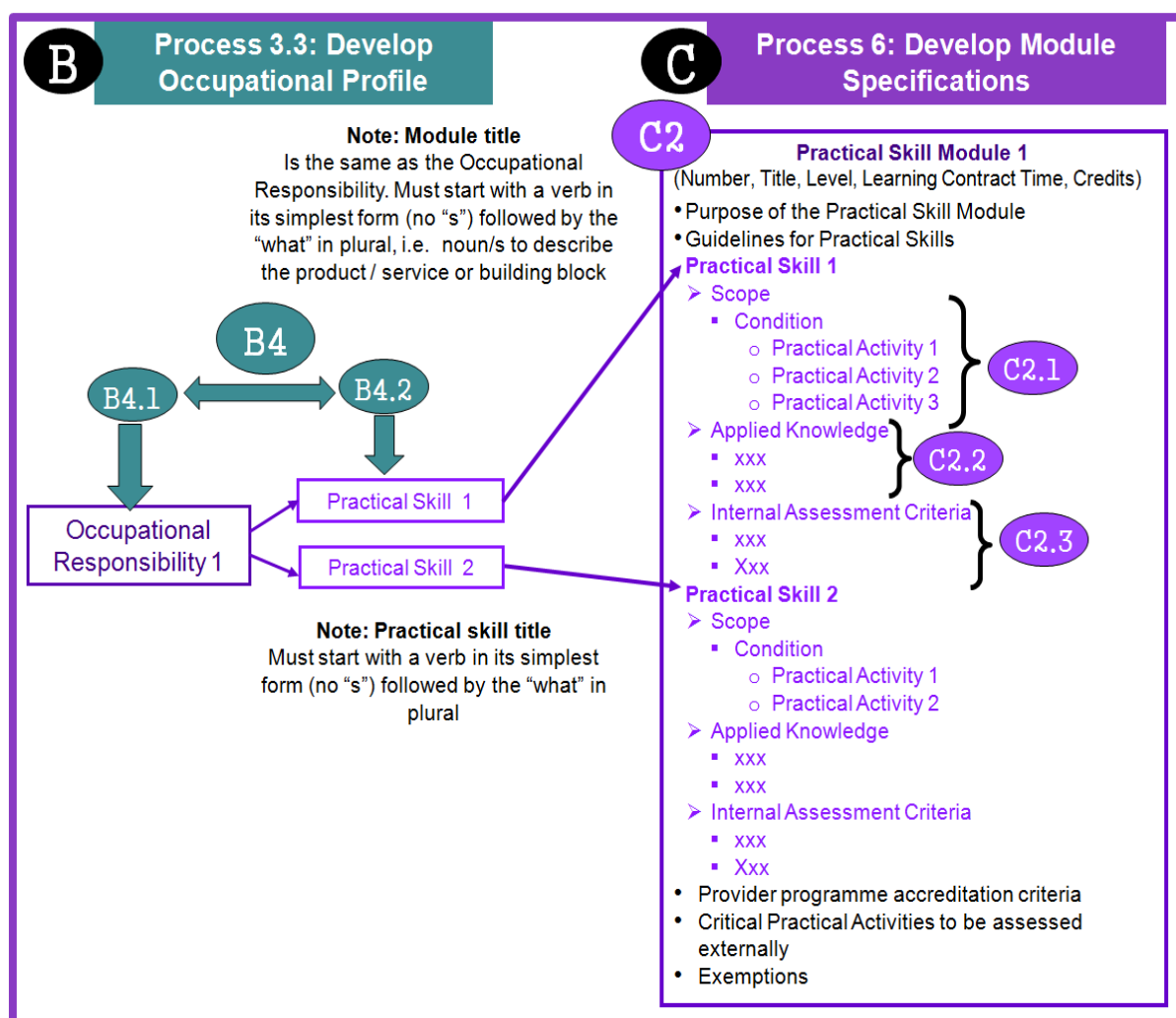


Figure 12: Steps for developing the practical skill module specifications

The content and structure of a practical skill module is outlined below.



**Figure 13: Content and structure of practical skill modules**

### 6.2.2.1 Step C2.1: Define the scope of each practical skill

During Step C2.1, for each practical skill identified during Step B4.2, the scope (associated practical skill activities and the condition for the offering thereof) is identified.

In preparation for this step, it will be necessary to compare the already identified practical skills with the information received from the DQP during Process 3.2. This includes comparing the content covered in the identified related qualifications on national or regional qualification frameworks and other occupational development processes elsewhere in the world (for international comparability) as well as qualifications and part qualifications registered on the NQF (to determine replacement and exemptions). If applicable, possible additional practical skills can be identified and brought to the attention of the working group for consideration.

The scope comprises the condition under which the practical skill must be performed as well as the associated activities that make up the skill and that must be performed

to reach competence in the practical skill. The condition serves as an indicator to skills development providers on what they need to have in terms of physical resources in order to offer the training related to the specific practical skill.

There should be more than one practical activity for each practical skill.

**Process Question**

**With reference to the existing qualifications as well as the occupational responsibilities identified during Step B4 2, ask:**

- “Are there any additional practical skills that must be addressed?”

**With reference to each of the practical skills identified, ask:**

- “What are the conditions under which the practical skill must be performed?” or
- “What are the inputs required to perform the practical skill?” or
- “What must the learner have at his/her disposal to perform the practical skill?”
- “Are there any additional physical resources that the skills development provider needs to have in order to offer the training required?”

**Note:** *Physical requirements refers to: learning support material; categories of equipment or tools; machinery; consumables; safety equipment.*

**Process Question**

**With reference to each of the practical skills identified, ask:**

“What are the practical activities that the learner must learn to perform in order to reach competence in the practical skill?”

Construction Rules
<ul style="list-style-type: none"> <li>• Start with a small letter and add the conditions, inputs and resources that must be provided to the learner to carry out the activities</li> </ul> <p>Following the sentence a learner must be able to:</p> <ul style="list-style-type: none"> <li>• List all practical activities.               <ul style="list-style-type: none"> <li>• Each practical activity listed must start with a verb in its simplest form, i.e. without an “s”.</li> </ul> </li> </ul>

Examples
<p><u>Fitter and Turner</u></p> <p><b>Practical skill:</b> Replace gearbox components and assemble a gearbox</p> <p><b>Scope:</b> Given a gearbox, tools, personal protective equipment, specifications and, material, the learner must be able to:</p> <ul style="list-style-type: none"> <li>• Identify potential hazards and risks related to the job and list the appropriate responses</li> <li>• Select tools, materials, equipment and lubricants</li> <li>• Replace worn, damaged, defective components or parts</li> <li>• Assemble, set and record gearbox components or parts’ numbers and specifications (including floats)</li> </ul>

### Plastics Manufacturing Machine Setter

**Practical skill:** Adjust machine and auxiliary equipment

**Scope:** Given machinery, tooling and materials and a production schedule, the learner must be able to:

- Interpret the production order and source the correct product specifications and machine settings.
- Evaluate the process settings against product specifications
- Change settings to meet product specifications

### Port Manager

**Practical skill:** Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed

**Scope:** Given task instructions for various scenarios, including organisational planning reports, activity documents, relevant templates, forms, and standard operating procedures, the learner must be able to:

- Evaluate organisational planning reports
- Identify goals and targets aligned to strategic objectives
- Evaluate organisational performance against operational deliverables and identify performance-related issues
- Formulate revised organisational strategies and presentations summarising the proposed changes

### Transport Coordinator

**Practical skill:** Identify and prepare transportation documentation for the trips

**Scope:** Given case studies, including sample work instructions, relevant templates, forms, typical company transport documentation formats, operational policies and standard operating procedures, the learner must be able to:

- Identify documentary requirements for each trip
- Prepare, and complete operational documents for each trip

Check to verify that all the details in the relevant documents are correct and conform to operational policies and standards

Not this	But rather this
<p><i>Given machinery, equipment tooling and materials and production orders, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• The statement does not capture all requirements for provider programme accreditation.</li></ul>	<p><i>Given machinery, equipment tooling and materials, production orders, product specifications and reporting documentation, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• Include all requirements as outlined in practical skill activities.</li></ul>
<p><i>Given <u>work instructions</u>, checklists, case studies, activity documents, relevant templates, forms, and standard operating procedures, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• The term “work instructions” should be avoided as this is not workplace activities.</li></ul>	<p><i>Given <u>task instructions</u> (including organizational planning reports), activity documents, relevant templates, forms, and standard operating procedures, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• Include aspects reflected in the workplace activities.</li></ul>

<p>Participate in organisations planning and compile a report</p> <ul style="list-style-type: none"> <li>• This reflects work activities and is difficult for a skills development provider to implement. Only in exceptional purposes should observation of workplace activities be used as in the development of practical skills. Such observation is better positioned as a work experience activity.</li> </ul> <p>Set goals and targets aligned with strategic objectives</p> <p>Set up and control relevant management systems</p> <ul style="list-style-type: none"> <li>• The above two activities is more workplace related</li> </ul> <p>Assess performance against operational deliverables</p> <p>Evaluate organisational performance</p> <ul style="list-style-type: none"> <li>• There seems to be very little difference between above two activities</li> </ul>	<p>Evaluate organisational planning reports</p> <p>Identify goals and targets aligned to strategic objectives</p> <p>Identify relevant management systems</p> <ul style="list-style-type: none"> <li>• Reflect activities that can be performed in a simulated environment.</li> </ul> <p>Evaluate organisational performance against operational deliverables and identify performance-related issues</p> <ul style="list-style-type: none"> <li>• Combine the two similar statements</li> </ul>
<p><i>Given work instructions</i>, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, <i>the learner must be able to</i>:</p> <ul style="list-style-type: none"> <li>• Avoid starting with the term “work instructions”. The list is confusing compiled.</li> </ul>	<p><i>Given case studies</i>, including sample work instructions, relevant templates, forms, typical company schedule formats, safety and quality principles and standard operating procedures, <i>the learner must be able to</i>:</p> <ul style="list-style-type: none"> <li>• Start with case studies and then list the documents and other resources which make up the case study that must be provided by providers to enable the activities.</li> </ul>
<p>Read, prepare, prioritize and complete operational document</p> <ul style="list-style-type: none"> <li>• Do not state in singular and do not list activities.</li> </ul>	<p>Identify documentary requirements for each trip</p> <p>Prepare, and complete operational documents for each trip</p> <p>Check to verify that all the details in the relevant documents are correct and conform to operational policies and standards</p> <ul style="list-style-type: none"> <li>• List activities separately using a plural to reflect the practice component of the activity to be performed in the simulated environment that the learner needs to perform to gain confidence and skill.</li> </ul>

**Note 1:** The scope statements will be used as criteria for provider programme accreditation in terms of physical requirements.

**Note 2:** When identifying additional practical skills remember the construction rules, i.e. start with a verb in its simplest form (without an “s”) followed by a description of the “what” in plural.

### 6.2.2.2 Step C2.2: Identify the applied knowledge for each practical skill

During Step C2 the applied knowledge to be learned as part of the practical skill must be identified. The practical / applied knowledge relates to the specific legal, production, process, quality or health and safety information. This will generally be in the form of smaller chunks of information or knowledge that will be offered as an integral part of the practical skill modules and that will not form part of knowledge modules offered at institutions.

**Note:** This is not the same as contextual knowledge pertaining to a specific workplace. It will be offered as part of the practical skill module by an accredited skills development provider.

#### Process Questions

With reference to each practical skill, ask:

- “What must the learner know and understand in order to perform the defined practical activities?”
- “Is any particular legal, production, process, quality, health and safety knowledge required to perform the practical skill?”
- “What are the implications, consequences and techniques associated with performing the practical skill that the learner must know about and understand?”

#### Construction Rules

- Compile a list of the specific knowledge required to perform the practical activities, i.e. technical information, typical health and safety and quality standards, typical procedures, tools, and techniques related to performing the activities etc.
- This should not be a repetition of items from the knowledge modules.

#### Examples

**Practical skill:** Replace gearbox components and assemble gearboxes

Fitter and Turner

**Applied knowledge:**

- Procedures for replacing and assembling gearboxes
- Original equipment manufacturers’ gearbox specifications
- Gearbox lubrication procedures
- Techniques for marking components for alignment and positioning

Plastics Manufacturing Machine Setter

**Practical skill:** Adjust machinery and auxiliary equipment

**Applied knowledge:**

- Setting procedures and techniques
- Impact of setting changes on the quality of the product
- Safety procedures during the setting process

<p><u>Port Manager</u></p> <p><b>Practical skill:</b> Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed</p> <p><b>Applied knowledge:</b></p> <ul style="list-style-type: none"> <li>• Organisational planning techniques</li> <li>• Stakeholder analysis techniques and tools</li> <li>• Risk and performance management tools and techniques</li> <li>• Contingency planning methods</li> <li>• Organisational structures and planning processes</li> <li>• Performance monitoring and evaluation practices</li> </ul> <p><u>Transport Coordinator</u></p> <p><b>Practical skill:</b> Identify and prepare required transportation documentation for the trips</p> <p><b>Applied knowledge:</b></p> <ul style="list-style-type: none"> <li>• Typical company policies related to the National Road Traffic Act (NRTA)</li> <li>• Driver driving requirements</li> <li>• Vehicle road worthiness standards SANS10047</li> </ul>
---

Not this	But rather this
Company operational policies and procedures <ul style="list-style-type: none"> <li>• This is organisation-specific (contextual) knowledge and is linked to the work experience modules.</li> </ul>	Typical operational policies and procedures Guidance to the provider to sources typical documents
Models of stakeholder analysis <ul style="list-style-type: none"> <li>• This is a typical knowledge module item.</li> </ul>	Stakeholder analysis techniques and tools <ul style="list-style-type: none"> <li>• Here the focus is on how the models are implemented</li> </ul>
Reference to concepts, principles, theories	Focus on techniques and legal, safety, health and environmental requirements.

**Note:** Participants must also be probed to determine whether there is any applied knowledge of importance relating to environmental and/or natural resources.

### 6.2.2.3 Step C2.3: Define the internal assessment criteria for each practical skill

During Step C2.3 the criteria that must be met during internal summative assessments of each practical skill (including the associated applied knowledge) must be specified.



Assessment criteria relate to the standard of performance that must be observed or determined. The assessment criteria should focus on the following aspects of each practical skill activity:

- Quality of the products or services that have been generated during the practical skill activity.
- Quality or output rates that must be achieved.
- Quality of the performance (process) during the practical skill activity – these can reflect consistency, confidence, attitude, values and good practice.
- Understanding of applied knowledge related to the practical skill.

#### Process Question

**With reference to each practical skill, ask:**

- “What is the critical evidence or standard that has to be assessed in the performance of this practical skill?”
- “What process and specific issues must be observed and evaluated?”
- “What are the products that must be evaluated and what are the key criteria for an acceptable product?”
- “What is the critical applied knowledge that must be assessed and what evidence is required to demonstrate an appropriate level of understanding?”

#### Construction rules

- Start with the piece of evidence or performance (process) being evaluated: e.g. “Gearbox components”, “Machine settings”, “The strategic plans or “The operational documents” “The emotions or disruptions”.
  - Then add the standard of performance to be achieved or criteria for the evaluation, e.g. “according to original equipment manufacturers’ specifications”.
  - In some instances add the criterion to the evidence before the evidence, e.g. “Correct product specifications and machine settings”.
- In some instances add a qualifier before the evidence, e.g. “Revised settings”, or “The completed operational documents”.

#### Examples

Fitter and Turner

**Practical skill:** Replace gearbox components and assemble gearboxes

**Internal assessment criteria:**

- Procedures to replace gearbox components and assemble gearboxes are described and applied
- Gearbox components are replaced according to original equipment manufacturers’ specifications
- Gearboxes are assembled according to original equipment manufacturers’ specifications
- Risks and hazards are identified and responded to in a responsible manner

Plastics Manufacturing Machine Setter

**Practical skill:** Adjust machinery and auxiliary equipment

**Internal assessment criteria:**

- Correct product specifications and machine settings are sourced
- Revised settings result in products that meet specifications.
- Relevant documentation is completed correctly

Port Manager

**Practical skill:** Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed

**Internal assessment criteria:**

- The evaluation of organisational planning reports is systematic and thorough, and identifies valid and pertinent performance-related issues.
- The revised strategic plans specify realistic goals and targets aligned with the strategic objectives and the performance issues that have been identified
- Reports on management systems demonstrate propose essential and practical changes
- The proposed revisions to operational strategies and the related presentations are clear, comprehensive and compelling

Transport Coordinator:

**Practical skill:** Identify and prepare required transportation documentation for the trips

**Internal assessment criteria:**

- The completed transportation documents meet legislative requirements.
- The correct documents have been prepared for each trip.

The process of checking the information on the forms is systematic and thorough

Not this	But rather this
Identify hazards and assess risks when assembling gearboxes <ul style="list-style-type: none"><li>• This is an assessment task and not an assessment criterion</li></ul>	Risks and hazards are identified and responded to in a responsible manner. <ul style="list-style-type: none"><li>• This reflects the items the learner must have identified and dealt with</li></ul>
Reports meet industry or company standards <ul style="list-style-type: none"><li>• This is too vague, unless there really is a published standard. If there is then the name of the standard needs to be referenced.</li><li>• Companies have a variety of standards so which company's standards are the standard?</li></ul>	Reports meet typical company standards
Reports on strategic planning meetings meet industry standards  The strategic plans specify realistic goals and targets aligned with the strategic objectives  Reports on management systems demonstrate improved efficiencies between different components of the organisation	The evaluation of organisational planning reports is systematic and thorough, and identifies valid and pertinent performance-related issues  The revised strategic plans specify realistic goals and targets aligned with the strategic objectives and the performance issues that have been identified  Reports on management systems demonstrate proposed essential and practical changes

#### 6.2.2.4 Step C2.4: Formulate the purpose of the practical skill module

During Step C2.4 the purpose statement is formulated to give a quick overview of what the learner will be expected to cover during the training to achieve competence with regards to the relevant module. The purpose statement is a brief description of the core focus of the training and associated learning and the critical aspects that must be covered by a learner during completion of this module.

The statement formulated must complete the sentence: “The focus of the learning in this module is on providing the learner an opportunity to:”

The second part of the purpose relates to what the learner will be required to do during completion of this module. The occupational qualification capturing tool populates this part by listing the different practical skills (generated during Step B4.2 and expanded during Step C2.1).

##### Process Question

With reference to the module title (occupational responsibility) and the list of practical skills covered by the module, ask:

- “What is the overall or main focus of the learning in this module?”
- “What are the critical aspects of this module?”

The purpose statement must follow the sentence “The focus of the learning in this module is on providing the learner an opportunity to”.

##### Construction rules

- Add a verb in its simplest form, i.e. without an “s” to summarise the intended outcome of the module. The statement must reflect what should be done to achieve what.
- Start with a small letter and end with a full stop.

##### Examples

###### Fitter and Turner:

**Module:** Replace components and sub-assemblies and assemble machines

**Purpose:** *The focus of the learning in this module is on providing the learner an opportunity to develop mechanical skills required to replace components and assemble a range of mechanical sub-assemblies and machines.*

###### Plastics Manufacturing Machine Setter:

**Module:** Set-up, programme and shut-down machinery and auxiliary equipment

**Purpose:** *The focus of the learning in this module is on providing the learner an opportunity to collect, analyse, organise and critically evaluate information when setting-up, programming, adjusting and shutting-down machinery and auxiliary equipment in order to meet product specifications.*

###### Port Manager:

**Module:** Manage port support operations

**Purpose:** *The focus of the learning in this module is on providing the learner an opportunity to evaluate and respond to information in case studies reflecting various scenarios regarding the*

management of port operations. Learners will be developing skills related to the formulation of organisational strategies, developing organisational structures, and aligning systems to optimise the strategies.

Transport Coordinator:

**Module:** Plan and prepare transportation schedules

**Purpose:** *The focus of the learning in this module is on providing the learner an opportunity to develop the skills to plan and prepare transport schedules within a simulated work environment.*

Not this	But rather this
<p><i>The focus of the learning in this module is on providing the learner an opportunity to <u>manage</u> the airport or harbour operational functions. Learners will be developing skills related to facilitating the formulation of organisational strategy for port operations, developing organisational structure for port operations, and identifying and aligning systems to optimise strategy for an airport or a harbour.</i></p> <ul style="list-style-type: none"> <li>• “Manage” is not possible in a simulated environment and must be further explained.</li> <li>• “Facilitate” requires real interaction which in this context is not possible.</li> </ul>	<p><i>The focus of the learning in this module is on providing the learner an opportunity to <u>evaluate and respond to information in case studies</u> reflecting various scenarios regarding the management of port operations. Learners will be developing skills related to the formulation of organisational strategies, developing organisational structures, and aligning systems to optimise the strategies.</i></p>
<p><i>The focus of the learning in this module is on providing the learner an opportunity to practice and display the planning and preparing of transport schedules within a simulated work environment. <u>The learners will be practicing skills related to the Transport Environment in any given scenario</u></i></p> <ul style="list-style-type: none"> <li>• The last section is not relevant.</li> </ul>	<p><i>The focus of the learning in this module is on providing the learner an opportunity to develop the skills to plan and prepare transport schedules within a simulated work environment</i></p>

### 6.2.2.5 Step C2.5: Determine learning contract time and allocate a credit value to the practical skill module

During step C2.5 the learning contract time is determined. The learning contract time constitutes the total amount of time that the learner needs to have access to the trainer (if required) to enable him or her to develop the range of practical skills, applied knowledge and understanding specified and includes time required to complete the activities, assignments, research, and internal assessments as well as the time required to acquire the applied knowledge. The learning contract time can be specified in days, hours or weeks.

One credit equals ten notional hours of learning and each learning contract day constitutes eight hours of learning. To calculate the credits, each day is multiplied by 0.8 to reflect notional hours of learning.

Hours	Days	Weeks	Actual Credit value	Credit value to be assigned
8	1		0.8	1
	2		1,6	1,5
	3		2,4	2,5
	4		3,20	3
	5	1	4	4

### Process Questions

With reference to each of the practical skills, ask:

- “How many hours/ days/weeks must be allocated for the learner to complete the full scope of practical skills described in the module?”

#### Construction rules

- Capture the learning contract time for the module in hours, days or weeks.
- Capture the associated credit value based on the principle that 10 notional hours of learning is equivalent to 1 credit.

#### Examples

Fitter and Turner: Replace components and sub-assemblies and assemble machines ,6 Credits (Learning contract time 7,5 days)

Plastics Manufacturing Machine Setter: Set-up, programme and shut-down machinery and auxiliary equipment, 24 Credits (Learning contract time 30 days)

Port Manager: Manage port support operations, 20 Credits (Learning contract time 25 days)

Transport Coordinator: Plan and prepare transportation schedules, 20 Credits (Learning contract time 25 days)

### 6.2.2.6 Step C2.6: Determine the NQF level of the practical skill module

During Step C2.6 the NQF level assigned to each occupational responsibility (see Step B4.3) is considered.

Each practical skill module is linked to a particular NQF level using the LARF (Level, Activities, Roles, Focus). The LARF document is a contextual interpretation of the NQF level descriptors and is used as a guideline for the occupational qualification sub-framework.

The SAQA level descriptors are used and then confirmed by starting with the “Typical activities” and “Role” columns to determine which description is the most appropriate for the specific practical skills module, taking into consideration the purpose, associated practical skills, practical activities and internal assessment criteria covered by the module. There should be some degree of correlation between the activities in the LARF and the content of the module.

The following table provides a summary of the LARF, but the complete LARF tool provided in Annexure B to this manual should be used when allocating NQF levels.

Levels	Typical activities	Role	Workplace Focus	Time span of Discretion
10	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession	10-15 years
9	Set and implement strategies	Leading and directing	The 'business landscape' or profession	5-10 years
8	Manage or design systems	Resource management	Policy, resource allocation	3-5 years
7	Manage or design processes	Changed practices	New technology, systems	1-3 years
6	Develop and implement changes	Optimisation	Improvements	6 mth -1yr
5	Maintain efficiencies	Stability and consistency	Systems	3-6 mth
4	Setup processes and solve process problems	Process management	Process data	1-3 mth
3	Adjust, maintain and oversee	Procedures	Productivity	1wk
2	Monitor, support	Operations	Machinery	1day
1	Perform elementary tasks	Tasks	Machines, tools	

#### Process Question

**With regard to the entire practical skill module, ask:**

- “What NQF Level should be assigned to this module?”
- “Does the content of the module reflect the NQF level allocated to the occupational responsibility during Step B4.3 (Process 3.3.4.5)?”

#### Examples

Fitter and Turner: Replace components and sub-assemblies and assemble machines, NQF Level 3

Plastics Manufacturing Machine Setter: Set-up, programme and shut-down machinery and auxiliary equipment, NQF Level 4

Port Manager: Manage port support operations NQF Level 6, 20 Credits

Transport Coordinator: Plan and prepare transportation schedules, NQF Level 4

#### 6.2.2.7 Step C2.7: Specify the provider programme accreditation criteria for the module

During Step C2.7 the requirements that a skills development provider must meet in order to be able to offer the practical skills component are specified.

The requirements should reflect the physical and human resources (including any legal aspects that may apply) that the provider should have in order to conduct the training and internal assessments.

The criteria specified will be used by the QCTO to evaluate an application by a skills development provider to be accredited to offer the module or cause it to be offered.

**Process Question**

**With reference to the module and practical skills in the practical skill module, ask:**

- “In order to provide the training specified in this module, what physical teaching resources must the provider have?”
- “What are the requirements in terms of trainers to offer the module?”
- “In order to offer the practical skill module, are there any legal requirements in terms of the occupation that the provider must comply with?”

Construction rules
<ul style="list-style-type: none"> <li>• Physical requirements should be referenced in the scope statement. The following statement must be completed:                      “The provider must have all the” xxxxxx                      The sentence must end with: specified in the scope statement.”</li> <li>• Human Resource Requirements refers to:                         <ul style="list-style-type: none"> <li>➤ Number and ratio of trainers.</li> <li>➤ Qualifications of trainers or years of relevant experience.</li> <li>➤ Professional registration of trainers, if any.</li> </ul> </li> <li>• Legal Requirements refers to:                         <ul style="list-style-type: none"> <li>➤ Legal requirements in terms of compliance with specific legislation pertaining to the training itself, if any</li> </ul> </li> </ul>

Examples
<p><b>Physical Requirements</b>                      All the machinery, consumables, equipment and documents specified in the scope statement.</p> <p><b>Human Resources Requirements</b></p> <ul style="list-style-type: none"> <li>➤ Trainer/learner ratio of 1:15 (Max)</li> <li>➤ Trainers must be qualified artisans</li> <li>➤ Trainers must be registered with NAMB as practicing artisans</li> </ul> <p><b>Legal Requirements</b>                      E.g. if the training is related to aviation:                      Approved and accredited as an Aviation Training Organisation with the South African Civil Aviation Authority</p>

**Note:** Reference to legal requirements should only be made where applicable.

**6.2.2.8 Step C2.8: Identify modules that the learner will be exempted from**

During step C2.8 any modules (e.g. unit standards, NCV or N subjects) covered by other national qualifications on the NQF that could be considered equivalent to or broader than the practical skill module and that would exempt the learner from completing this module are specified.

### Process Question

With reference to the module, ask:

- “Are there any qualifications, learning programmes or unit standards that if completed will exempt the learner from doing this module?”

#### Construction rules

- Capture the number and name of the qualification, unit standard or module.

#### Examples

- NCV – Plumbing (Level 2)
- N2 – Electrical trade theory
- 26278: Apply plumbing principles as they pertain to the installation of a hot water system (NQF Level 2) 8 Credits
- 714208-KM-12: Health and safety within a manufacturing context, NQF Level 2 (4)

**Note 1:** No reference should be made to RPL.

**Note 2:** Any exemptions must also be listed in the rules of combination in the assessment specifications document.

### 6.2.3 Process 6.2.3: Define the knowledge module specifications (Step C3)

Knowledge module specifications reflect discipline or conceptual knowledge (including theory, e.g. occupational or trade theory) which an individual has to have in order to produce the products/services identified in the occupational profile and to perform the occupational tasks proficiently. This knowledge is frequently common to a group of related occupations in the same unit group.

The level of knowledge to be covered will depend on the knowledge base held by those entering from lower level occupations and pre-requisite qualifications from other sub-frameworks. For occupational qualifications at NQF Levels 3 and 4, the content of Foundational Learning must be into account when defining the knowledge.

The purpose of knowledge module specifications is to describe the content of each module in terms of the topics and associated topic elements to be covered in a learning programme as well as the assessment criteria thereof.

The knowledge module specifications are developed by educationalists providing similar content at institutions and will form the primary basis for articulation with the other sub frameworks of the NQF. The specifications must be compared with and evaluated against existing educational offerings where these exist.



Knowledge modules are mostly offered in an institutional setting as preparation for occupational learning.

The development of the knowledge module specifications includes nine steps:

- STEP C3.1 Cluster knowledge focus areas into groups to become modules
- STEP C3.2 Identify topics and topic elements for each knowledge module
- STEP C3.3 Define the internal assessment criteria and weight for each topic
- STEP C3.4 Formulate the purpose of the knowledge module
- STEP C3.5 Determine learning contract time and allocate a credit value to the knowledge module
- STEP C3.6 Determine the NQF level for the knowledge module
- STEP C3.7 Identify exemptions from educational programmes
- STEP C3.8 Specify provider programme accreditation criteria for the entire knowledge component

The figure below provides a graphical illustration of the above mentioned process steps.

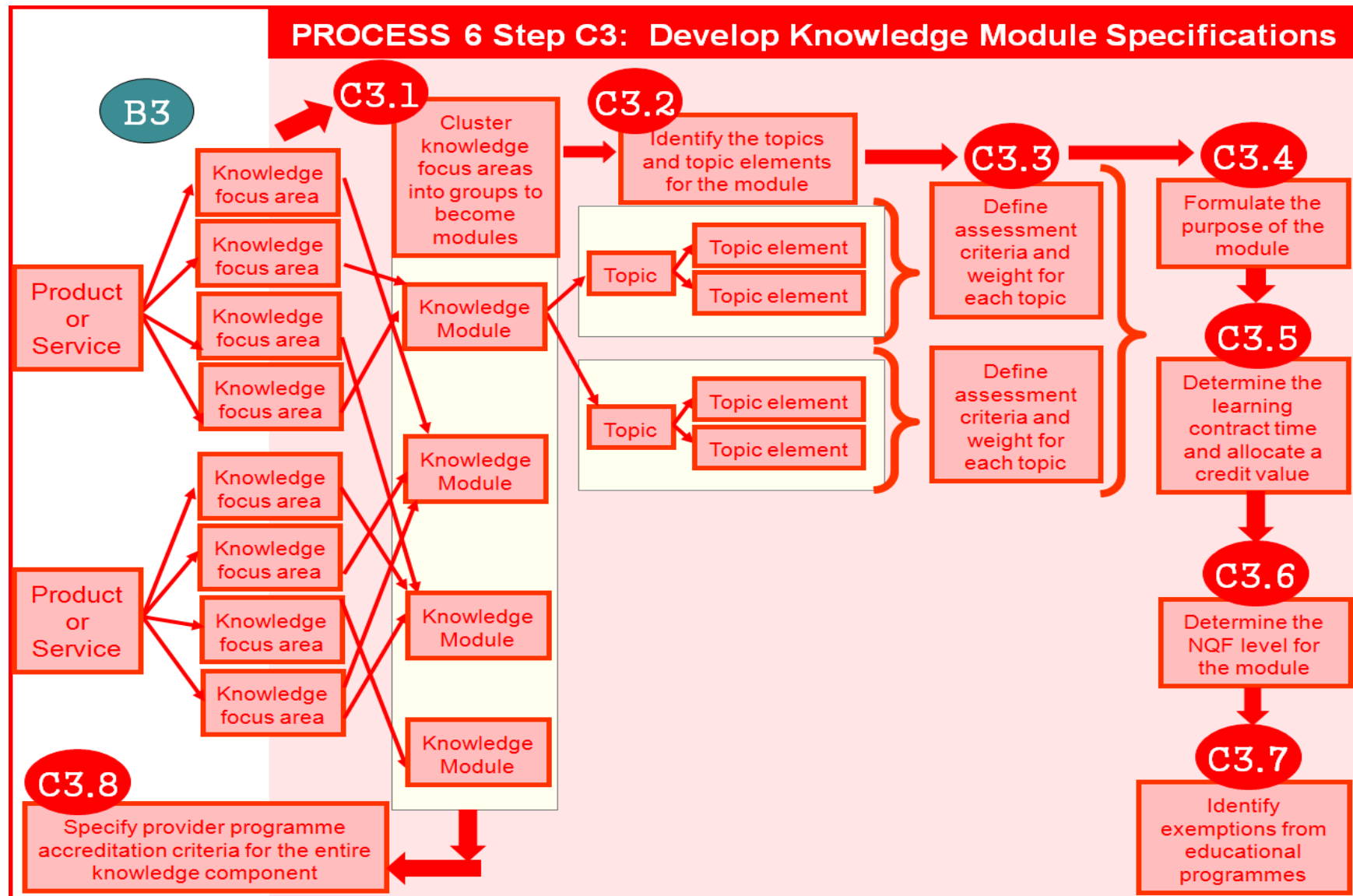
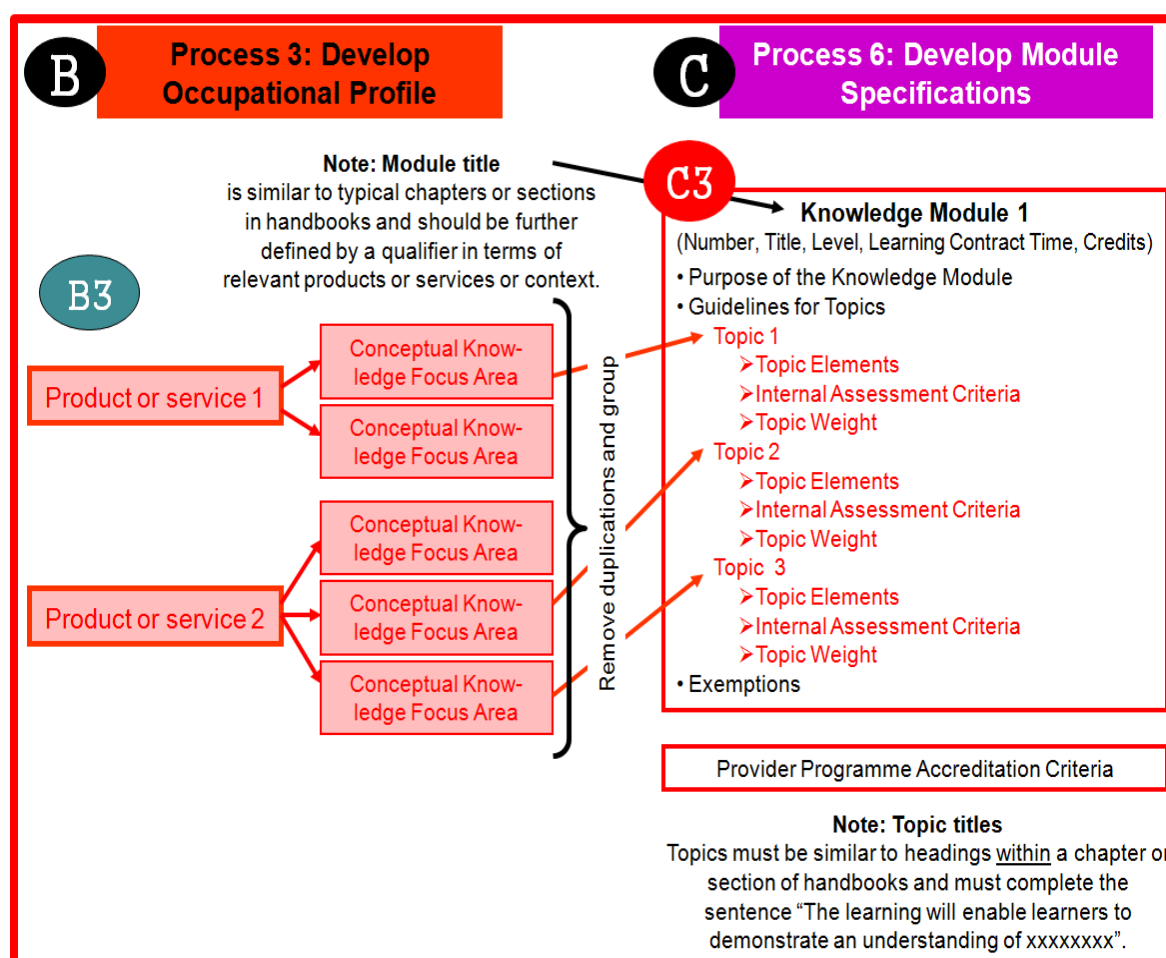


Figure 14: Steps for developing the knowledge module specifications

The content and structure of a knowledge module is outlined below.



**Figure 15: Content and structure of knowledge modules**

### 6.2.3.1 Step C3.1: Cluster knowledge focus areas into groups to become modules and name them

During Step C3.1 a title is identified for each knowledge module. The knowledge focus areas (disciplinary or conceptual knowledge and theory, e.g. occupational or trade theory) identified during Step B3 must be as far as possible grouped into themes or teachable units to become knowledge modules. Grouping into teachable units also means that knowledge should be stratified by NQF level, i.e. all the knowledge focus areas in a module must be at the same level, to make it easier to implement the curriculum.

In preparation for this step, it will be necessary to compare the already identified knowledge focus areas with the information received from the DQP during Process 3.2. This includes comparing the content covered in the identified related qualifications on national or regional qualification frameworks and other occupational development processes elsewhere in the world (for international comparability) as well as qualifications and part qualifications registered on the NQF (to determine replacement and exemptions). If applicable, possible additional knowledge focus

areas can be identified and brought to the attention of the working group for consideration.

First, all the knowledge focus areas identified during Step B3 must be listed, rated in terms of complexity and grouped based on level of complexity and similarity of theme.

**Note:** Consider structuring knowledge focus areas as:

- a) *foundational (i.e. basic concepts),*
- b) *operational or process knowledge (i.e. how basic concepts and additional categories of knowledge relate to real-world operations and processes),*
- c) *systems knowledge (i.e. how processes interrelate to form and interact as systems.*

Or use the revised Bloom’s Taxonomy, i.e. *factual, conceptual, procedural and meta cognitive knowledge.*

Allocating knowledge focus areas to knowledge modules						
Knowledge Focus Areas	Knowledge Modules					
	Accounting Fundamentals	Business Mgt Fundamentals	Asset Mgt Fundamentals	Compliance	Finance	Legal
Financial ratios determining the health of a business						X
Financial statements and accounting principles	X					
Simple arithmetic functions	X					
Financial accounting principles	X					
Business planning principles		X				
Statutory requirements for a retail business					X	
Principles of shrinkage & loss control management					X	
Principles of safety, health and security management					X	
Principles and methods of asset management			X			
Legal requirements and procedures					X	
Principles of maintenance management			X			
Principles of quality management		X				
Principles of risk management		X				

**Figure 16: Grouping knowledge focus areas**

Then a suitable name for each theme or group must be identified. The name must be similar to typical chapters or sections in handbooks and can be further defined by a qualifier in terms of relevant products or services. It must also be ensured that the overall level of complexity relates to that of the occupational responsibilities (practical skill modules) and occupational contexts (work experience modules).

**Process Question**

**With reference to the knowledge focus areas identified during Step B3, ask:**

- “Which of the knowledge focus areas can be grouped together under a single heading / theme?”
- “Do any of the themes require additional knowledge focus areas at a different level?”
- “What could be a suitable name to reflect each theme or group of related knowledge focus areas at the same level of complexity?”

**Construction Rules**

The name must be similar to typical chapters or sections in handbooks and should be further defined by a qualifier in terms of relevant products or services.

**Examples**

Fitter and Turner: Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)

Plastics Manufacturing Machine Setter: Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)

Port Manager: Airport and harbour operations management principles, NQF Level 6, 12 Credits (Learning contract time 15 days)

Transport Coordinator: Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)

Not this	But rather this
<p>Engineering theories</p> <ul style="list-style-type: none"> <li>• Theories suggest that there are different approaches to mechanical engineering</li> <li>• Which type of engineering?</li> <li>• There is no indication of the level of knowledge required</li> </ul>	<p>Basic mechanical engineering theory</p> <ul style="list-style-type: none"> <li>• “Theory” represents the overall range of knowledge</li> <li>• “Mechanical” reflects the field</li> <li>• “Basic” represents the level of knowledge required</li> </ul>
<p>Quality in the manufacturing process</p> <ul style="list-style-type: none"> <li>• Which manufacturing process or Is there only one manufacturing process?</li> <li>• There is no context.</li> </ul>	<p>Quality in plastics manufacturing processes</p>
<p>Airport / harbour operations management</p> <ul style="list-style-type: none"> <li>• “/” presents an either or situation</li> </ul>	<p>Principles of airport and harbour operations management</p>
<p>Health, Safety, Quality and Legislation</p> <ul style="list-style-type: none"> <li>• There is no context</li> </ul>	<p>Transportation related legislation, safety, health and quality</p>
<p>Very general and not referring to a product, service or context, e.g. “Preparation, installation and maintenance theory”</p>	<p>Reflect the product, service or context, e.g. “Preparation, installation and maintenance theory for solar water heating systems”</p>

**Note:** Knowledge modules of less than 4 credits can span more than one level of complexity, but knowledge modules of more than 4 credits should be broken up if more than one level of complexity is to be covered.

### 6.2.3.2 Step C3.2: Identify the topics and topic elements for the knowledge module

During Step C3.2 a range of topics and associated topic elements to be covered by the module are identified. The knowledge focus areas already allocated to the module during Step C3.1 are likely to constitute the topics, but if any of the identified knowledge focus areas consist of small, discrete pieces of knowledge, they should rather be reflected as topic elements within other, relevant topics. Where required, additional topics must be identified to fill gaps and duplications must be deleted.

Topics must be similar to headings within a chapter or section of a handbook. The topics will also be reflected in the second part of the purpose statement of the relevant module specification (see Step C3.4) and must reflect what the learner will be required to learn during completion of this knowledge module. Topic titles must be formulated to complete the following sentence: “The learning will enable learners to demonstrate an understanding of: xxxxx”. The knowledge module specifications are developed by educationalists providing similar content at institutions and will form the primary basis for articulation with the other sub-frameworks of the NQF.

Each topic must be further unpacked by identifying required learning elements (topic elements). Topic elements must be described in terms of concepts, principles and relationships. Where additional information is required, i.e. a range statement, this should be reflected by adding the word “including” after the topic element and then a list of items.

#### Process Question

**With reference to each of the knowledge focus areas, ask:**

- “Is this a topic or topic element”
- “Are there any additional knowledge focus areas (topics) that are required to fill gaps in the theme?”

**With reference to each of the identified topics, ask:**

- “What learning elements must be covered in this topic?”
- “What should the learner be expected to do/know in relation to each of the topics?”
- “Is there a specific range of items required for this topic element?”

### Construction Rules

- Topics must be reflected as statements similar to headings in handbooks and can be further defined by a qualifier in terms of relevant products or services.
- Topic elements must be reflected as statements and may not contain verbs.
- Where required, range statements must be reflected by adding the word “including” after the topic element followed by a list of items.

### Examples

#### **Fitter and Turner:**

**Module:** Basic mechanical engineering theory

**Topic:** Workplace health, safety and environmental protection

#### **Topic elements:**

- General overview of relevant occupational health and safety legislation
- General workshop safety rules
- Types of personal protective equipment
- Hazard identification and risk assessment principles
- Concepts related to environmental protection and pollution

#### **Plastics Manufacturing Machine Setter:**

**Module:** Plastics processing technology

**Topic:** Plastics manufacturing processes

#### **Topic elements:**

- Safety procedures related to operating processing equipment, including up- and down-stream equipment, and auxiliary equipment such as robotics, pre- and post-treatment, packaging and printing equipment
- Start-up and shut-down procedures for machinery, including up- and down-stream equipment, and auxiliary equipment such as robotics, pre- and post-treatment, packaging and printing equipment
- Cycle times, including their importance and their impact on quality and productivity
- Principles related to using or adding regrind material to the production process

#### **Port Manager:**

**Module:** Airport and harbour operations management principles

**Topic:** Airport and harbour operations

#### **Topic elements:**

- Components of airport and harbour operations, including infrastructure, facilities and people
- Operational systems, including component interaction
- Basic concepts related to airside and landside maintenance, including operational readiness rates, preventative and corrective maintenance, and critical maintenance standards affecting airside and terminal operations

#### **Transport Coordinator:**

**Module:** Transport risk management principles

**Topic:** Incidents and accidents

#### **Topic elements:**

- Definitions and characteristics of incidents and accidents
- Preliminary actions for incidents and accidents
- Incident and accident procedures
- Preventative measures

Not this	But rather this
General overview of occupational health and safety legislation <ul style="list-style-type: none"> <li>• The scope of the topic is too broad</li> </ul>	General overview of relevant occupational health and safety legislation
Start-up and shut-down procedure for machinery <ul style="list-style-type: none"> <li>• Procedures vary from one workplace to another – what is meant here are the general steps</li> </ul>	Steps in starting up and shutting down plastics processing equipment
Describe airport and harbour business dynamics <ul style="list-style-type: none"> <li>• Do not use verbs</li> </ul>	Airport and harbour business dynamics
Differentiate between Incidents and Accidents <ul style="list-style-type: none"> <li>• Do not use verbs – state as content items</li> </ul>	Definitions and characteristics of incidents and accidents

### 6.2.3.3 Step C3.3: Define the internal assessment criteria and weight for each topic

During Step 3.3 the criteria that must be met during internal summative assessments of each topic are specified. A weight (reflected as a percentage) is also allocated to indicate the relative importance that should be given to the topic during the learning and internal assessment processes.

Check that the wording used in the assessment criteria reflects the required NQF level. At this point the NQF level of the various topics is also determined and checked to determine whether it is necessary to move some of the topics and some of the associated assessment criteria to a knowledge module at a more appropriate NQF level to facilitate scaffolded learning. This will be particularly important in multi-year qualifications.

#### Process Question

**With reference to each topic and related topic elements, ask:**

- “What specific knowledge must be tested to demonstrate that the learner knows, understands or can apply the topic as a whole?”
- “What must the learner do to demonstrate that the learner has acquired the required knowledge?”
- “How can this be tested and at what NQF level is this understanding?”
- “Is there a requirement to split the knowledge module into different levels?”
- “What is the overall weight that this topic has in relation to other topics of the module?”

#### Construction Rules

- Start with a verb in its simplest form, i.e. without an “s” to indicate what the learner has to do to prove that he/she knows or understands or can apply this knowledge.
- Then add the actual elements to be assessed if appropriate.



## Examples

### **Fitter and Turner:**

**Module:** Basic mechanical engineering theory.

**Topic:** Workplace health, safety and environmental protection (20%).

#### **Assessment Criteria**

- Describe general safe work practices.
- Identify safety signs and describe the associated risks and safety measures.
- Discuss the inter-relationship between workplace safety and a productive work environment.

### **Plastics Manufacturing Machine Setter:**

**Module:** Plastics processing technology.

**Topic:** Plastics manufacturing processes (100%).

#### **Assessment Criteria**

- Describe the safety procedures for operating machinery and down-stream and up-stream equipment.
- Describe the importance and impact of cycle times.
- Describe the various stages of machine cycle times and how each stage can be adjusted.

### **Port Manager:**

**Module:** Principles of airport and harbour operations management.

**Topic:** Airport and harbour operations (20%).

#### **Assessment Criteria**

- Describe the various components of airport and harbour operations and explain how these components interact to form an operational system.
- Describe the various risks and hazards associated with airport and harbour ground operations and discuss how they can be effectively managed.
- Describe the challenges faced by airports and harbours and discuss the new operational, business and ownership models that have emerged in response to these challenges.

### **Transport Coordinator:**

**Module:** Transport Risk.

**Topic:** Incidents and accidents (50%).

#### **Assessment Criteria:**

- Explain the difference between incidents and accidents within the transport industry.
- Explain what actions should be taken to avoid incidents and accidents in accordance with specific procedure.
- Discuss the incident and accident procedures relevant to each specific road transport operation or industry

Not this	But rather this
<p><b><u>Plastics Manufacturing Machine Setter:</u></b></p> <p>Explain procedure to safely operate machinery/down-stream equipment, up-stream equipment, <i>auxiliary equipment (robotics, pre-treatments, post-treatment, packaging and printing etc)</i></p> <p>This is part of the range statement.</p>	<p>Describe the safety procedures for operating machinery and down-stream and up-stream equipment.</p>

<p><u>Port Manager</u></p> <p><i>Get an overview of the challenges Airport / Harbour are facing and analyse the new operational, business and ownership models that emerged in response to each challenge.</i></p> <p><i>Get an overview and analyse are activities.</i></p>	<p>Describe the challenges airports and harbours are facing and the new operational, business and ownership models that have emerged in response to each challenge.</p>
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### 6.2.3.4 Step C3.4: Formulate the purpose of the knowledge module

During Step C3.4 a purpose statement is formulated to give a quick overview of what the learner will be expected to learn in order to develop a broader understanding of the underlying theory and concepts related to the products or services to be delivered through the occupational tasks. The purpose statement is a brief description of the core focus of the learning and the critical aspects that will be covered by a learner during completion of this knowledge module.

The statement formulated must complete the following sentence: “The main focus of the learning in this knowledge module is to build understanding of xxxxxxx”.

The second part of the purpose relates to what the learner will be required to learn during completion of this knowledge module.

#### Process Question

**With reference to all the topics identified, ask:**

- “What is the main focus of this knowledge module?”
- “What is the overall outcome or purpose of the knowledge module?”

#### Construction Rules

- Complete the sentence “The main focus of the learning in this knowledge module is to build an understanding of...”
- Then summarise the intended outcome of the knowledge module as a statement, always taking the context into consideration.
- Start with a small letter and end with a full stop.

#### Examples

Fitter and Turner: Basic mechanical engineering theory.

*The main focus of the learning in this knowledge module is to build an understanding of basic engineering concepts commonly associated with mechanical engineering trades.*

Plastics Manufacturing Machine Setter: Plastics processing technology.

*The main focus of the learning in this knowledge module is to build an understanding of the properties, construction and functions of moulds, dies and forming devices, their handling and transportation requirements and their importance and application in the plastics manufacturing process.*

Port Manager: Principles of airport and harbour operations management.

*The main focus of the learning in this knowledge module is to build an understanding of the operational management principles which underpin improvements in the performance of airports and harbours.*

Transport Coordinator: Transport risk management principles.

*The main focus of the learning in this knowledge module is to build an understanding of the various incidents and emergencies which may occur in the transportation industry.*

Not this	But rather this
<p><i>Airport and harbour operations management principles.</i></p> <p>... Airport or harbour management staff in order to improve the performance of Airport / Harbour.</p> <ul style="list-style-type: none"> <li>• This statement confuses the purpose of the module with the purpose of the qualification – The use of “/” creates confusion. Does it mean “and” or “or”?</li> <li>• The use of the singular and capitalisation creates the impression that this is a specific airport of harbour.</li> </ul>	<p>.... the operational management principles which underpin improvements in the performance of airports and harbours.</p>
<p><i>Transport risk management principles.</i></p> <p>.... the various emergencies which may occur.</p> <ul style="list-style-type: none"> <li>• Too general- needs to be contextualised.</li> </ul>	<p>.... the various incidents and emergencies which may occur in the transportation industry.</p>

### 6.2.3.5 Step C3.5: Determine learning contract time and allocate a credit value to the knowledge module

During step C3.5 the learning contract time is determined. The learning contract time constitutes the total amount of time it would require to enable an average learner to complete the learning defined in the knowledge module. It constitutes the total amount of time that the learner needs to have access to the provider to enable him or her to acquire the required knowledge and develop the understanding specified in the module and includes time spent in the structured learning environment, time required for completing assignments and research, time spent on self-study and time spent preparing for and participating in internal assessment processes. The learning contract time can be specified in days, hours or weeks.

One credit equals ten notional hours of learning and each learning contract day constitutes eight hours of learning. To calculate the credits, each day is multiplied by 0.8 to reflect notional hours of learning.

Hours	Days	Weeks	Actual Credit value	Credit value to be assigned
8	1		0.8	1
	2		1,6	1,5
	3		2,4	2,5
	4		3,20	3
	5	1	4	4

**Process Question**

With reference to all the topics and topic elements identified, the module purpose and the CCFO's, ask:

- “How many hours/ days/weeks must be allocated for the learner to learn and understand all the elements described in the module?”

Construction Rules
<ul style="list-style-type: none"> <li>• Capture the learning contract time for the module in hours, days or weeks.</li> <li>• Capture the associated credit value based</li> </ul>



Examples
<p><u>Fitter and Turner</u>: Basic mechanical engineering theory, 32 Credits (Learning contract time 40 Days)</p> <p><u>Plastics Manufacturing Machine Setter</u>: Plastics processing technology, 14 Credits (Learning contract time 17,5 Days)</p> <p><u>Port Manager</u>: Airport and harbour operations management principles, 12 Credits (Learning contract time 15 days)</p> <p><u>Transport Coordinator</u>: Transport risk management principles, 6 Credits (learning contract time 7,5 days)</p>

### 6.2.3.6 Step C3.6: Determine the NQF level for the knowledge module

During Step C3.6 the NQF level for each knowledge module is determined using the SAQA level descriptors. See ANNEXURE B of this manual.

**Process Question**

With regards to each knowledge module, ask:

- “Which descriptor is best reflected by the knowledge module?”
- “Does this level truly reflect the complexity of the module?”

Examples
<p><u>Fitter and Turner</u>: Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)</p> <p><u>Plastics Manufacturing Machine Setter</u>: Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)</p> <p><u>Port Manager</u>: Airport and harbour operations management principles, NQF Level 6, 12 Credits (Learning contract time 15 days)</p> <p><u>Transport Coordinator</u>: Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)</p>

### 6.2.3.7 Step C3.7: Identify exemptions from educational programmes

During Step C3.7 it is determined whether there are any subjects in other educational programmes or modules in other occupational qualifications that cover the content of the module and would therefore exempt a learner who had already completed these subjects or modules from completing the specific knowledge module.

**Process Question****With reference to the module, ask:**

- “Are there any qualifications, learning programmes or unit standards that if completed will exempt the learner from doing this module?”

**Construction rules**

Capture the number and name of the qualification, unit standard or module.

**Examples**

- NCV – Plumbing (Level 2)
- N2 – Electrical trade theory
- 26278: Apply plumbing principles as they pertain to the installation of a hot water system, NQF Level 2, 8 Credits
- 714208-KM-12: Health and safety within a manufacturing context, NQF Level 2, 4 Credits

**Note 1:** No reference should be made to RPL.

**Note 2:** Any exemptions will also be reflected in the rules of combination in the external assessment specifications document.

### 6.2.3.8 Step C3.8: Specify provider programme accreditation criteria for the entire knowledge component

During Step C3.8 the requirements that a skills development provider must meet in order to be able to offer the knowledge component are specified.

The requirements should reflect the physical and human resources (including any legal aspects that may apply) that the provider should have in order to be able to provide the learning and conduct the internal assessments.

The criteria specified will be used by the QCTO to evaluate an application by a skills development provider to be accredited to offer the component or cause it to be offered.

The requirements for each individual module can be identified during the development thereof, but will only be reflected as a summary at the end of the entire component.

**Process Question****With reference to each of the modules and topics in the knowledge component, ask:**

- “In order to offer the content of this knowledge module, what physical teaching resources must the provider have?”
- “What are the requirements in terms of lecturers to offer the module?”
- “In order to offer the knowledge module, are there any legal requirements in terms of the occupation that the provider must comply with?”

### Construction rules

Keep a record for each individual module and summarise after all knowledge module specifications have been completed.

- For Physical and Human Resource Requirements:
  - First reflect the requirements that were identified for every knowledge module.
  - Then reflect any specific requirements only pertaining to certain modules.
- Physical Requirements refers to:
  - Lesson plans.
  - Learning material.
  - Equipment.
- Human Resource Requirements refers to:
  - Number and ratio of lecturers.
  - Qualifications of lecturers or years of relevant experience.
  - Professional registration of lecturers, if any.
- Legal Requirements refers to:
  - Legal requirements in terms of compliance with specific legislation pertaining to the training itself, if any.

### Examples

#### Physical Requirements

The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules.

***In addition the following must be provided:***

- A computer per student in class for module xxxx

#### Human Resources Requirements

- Lecturer/learner ratio of 1:30 (Max).
- Lecturers for module xxxx must be registered with the SA Board of Personnel Practice.

#### Legal Requirements

- Approved and accredited as an Aviation Training Organisation with the South African Civil Aviation Authority

Not this	But rather this
Always referring to availability of learning material irrespective of NQF level.	Learning support material is required up to NQF Level 4. Beyond Level 4 a reference list of resources is sufficient.
Referring to the administrative capacity or physical attributes of the institution e.g. must have a library or information management system or be accredited with QCTO. This is institutional accreditation requirements.	Only refer to physical resources necessary to offer the specific curriculum or module.
Specific references to classrooms and institutional learning facilities.	Allow for distance and e-learning modalities.

## 6.3 Process 6.3: Provide additional information to the DQP

During Process 6.3 additional information related to the curriculum and outlined below is compiled and submitted to the DQP for evaluation, feedback and inclusion in the Process Report. The additional information includes:

- Process 6.3.1 Prepare an outline on international comparability
- Process 6.3.2 Prepare an outline of the qualifications to be replaced
- Process 6.3.3 Prepare an outline on articulation
- Process 6.3.4 Prepare an outline on the assigned NQF level

### 6.3.1 Process 6.3.1: Prepare an outline on international comparability

During Process 3.2, information on qualifications to be considered for international comparability should have been received from the DQP. Additional qualifications might have been identified by working group members during Process 9.4.

The information contained in similar qualifications elsewhere in the world or on other national or regional qualifications frameworks aimed at this occupation, and/or occupational development processes and best practices elsewhere in the world (for example training, apprenticeship or professional development schedules or programmes) aimed at this occupation, and obtained from the DQP during Process 3.2, must be compared with the content in the curriculum.

A detailed comparison (including graphs where applicable) must be prepared on how the intended qualification compares with or relates to these qualifications or occupational development processes in terms of the nature of training, e.g. duration (including the ratio of time spent at the workplace to time spent in institutional training) and the content covered in the training.

The information on international comparability must contain a **summary** on how the **qualification** compares with or relates to similar **qualifications** or best practices with regard to training offered internationally or on other national and regional qualification frameworks. The following must be reflected:

- Countries used and why (e.g. references may be given to international agreements on relevant qualification standards) as well as the name of the qualifications
- A summary of similarities and differences in terms of, for example, content, structure, level and duration.

**Note 1:** *This summary will be captured on the electronic capturing tool for inclusion in the qualification.*

**Note 2:** *According to SAQA the information should assist in determining the articulation possibilities of the qualification with qualifications in other national and regional qualification frameworks. Not only names of countries should be mentioned, but also the names of the actual qualifications considered for this purpose.*

In addition to the summary an **explanation** should be provided on the process followed and detailed graphs could be provided.

**Note 3:** *This explanation must not be captured on the electronic capturing tool for inclusion in the qualification but will only be reflected in the DQP process report.*

### 6.3.2 Process 6.3.2: Prepare an outline of the qualifications to be replaced

A list must be prepared on all the qualifications obtained from the DQP during Process 3.2 to be considered. Any additional qualifications identified by working group members during Step B9.4 must also be added to the list.

An explanation must be provided on the extent that the curriculum covers or does not cover these qualifications.

The SAQA ID, the qualification title and NQF Level must be reflected.

Examples
<ul style="list-style-type: none"><li>• SAQA ID 63473 NC: Mechanical Engineering: Fitting Manufacturing and Engineering NQF Level 2</li><li>• SAQA ID 63469 NC: Mechanical Engineering: Fitting Manufacturing and Engineering NQF Level 3</li><li>• SAQA ID 63479 Further Education and Training Certificate: Mechanical Engineering: Fitting Manufacturing and Engineering NQF Level 4</li></ul>

In the case of a trade, a list must also be prepared of all trades recorded by SAQA that will be replaced.

**Note:** *The DQP must consider this information and negotiate with stakeholders on the replacement of these qualifications and provide feedback during Step 8.2 to the QDF on which of these qualifications must be listed for replacement during the capturing process.*

### 6.3.3 Process 6.3.3: Prepare an outline on articulation

A statement must be prepared on articulation. During Process Step B9.3, articulation possibilities were identified and evaluated during the process of developing the module specifications.

Articulation relates to the relationship of qualifications within the Occupational Qualifications Sub-Framework and between the different Sub-Frameworks and covers both horizontal and vertical progression options.

The statement on articulation must provide an indication of how this qualification will enable a learner to develop him/herself within the same NQF level (on the OQSF and/or other sub-frameworks) and/or progress to higher NQF levels (on the OQSF and/or other sub-frameworks).



Specific articulation refers to how the qualification relates to other qualifications at the same NQF level or at NQF levels above it on the Occupational Qualifications Sub-Framework.

Systemic articulation refers to articulation of the qualification to qualifications on the other Sub-Frameworks (access to qualifications on other sub-frameworks).

In the absence of qualifications at those levels, an indication of future possibilities should be provided. Reference can be made to qualifications aimed at similar or higher level occupations, i.e. which the learner can articulate to.

The OFO can be used to identify possible related occupations on the same level (e.g. within the same unit group at least) and the table attached as ANNEXURE D can be used to identify possible occupations at higher levels.

**Note 1:** *Articulation never refers to qualifications on which a qualification is “built” and may therefore not refer to qualifications of feeder occupations.*

**Note 2:** *There should be consistency between the rationale of the qualification and the statement on articulation, i.e. when it is indicated in the rationale that the aim is to equip learners with knowledge that will assist them to progress into or pursue a qualification or career at the same or higher levels, then this should be confirmed by the statement on articulation.*

**Note 3:** *Reference can be made to qualifications related to specific occupations.*

Not this	But rather this
<p><u>Fitter and Turner</u> This qualification articulates with qualifications within the mechanical trades related to the following occupations:</p> <ul style="list-style-type: none"> <li>○ Fitter and Turner supervisor</li> <li>○ Fabricator</li> <li>○ Fitter and Turner trainer</li> <li>○ Automotive Machinist</li> <li>○ Metal Machinist</li> <li>➤ Referring to specialisations such as Automotive machinists</li> <li>➤ There is no occupation called “fabricator”</li> </ul>	<p><u>Fitter and Turner</u> Horizontal articulation is possible to qualifications for other metal working machine tool setters and operators such as metal machinists</p> <ul style="list-style-type: none"> <li>● Refer to qualifications for the unit group and specific occupations in the unit group.</li> </ul> <p>Vertical <u>articulation</u> is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications for mechanical engineering technicians</li> <li>○ qualifications for operations, manufacturing or quality manager</li> <li>● Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>

<p><u>Plastics Manufacturing Machine Setter:</u></p> <p>Horizontal Articulation</p> <p>There are currently no qualifications which provide for any horizontal articulation with this qualification.</p> <p>Vertical Articulation</p> <p>Currently there are no higher-level qualifications, which provide for vertical articulation with this qualification.</p> <ul style="list-style-type: none"> <li>• Referring to the current situation only</li> </ul>	<p><u>Plastics Manufacturing Machine Setter:</u></p> <p>Horizontal articulation is possible to qualifications for other agricultural and industrial machinery mechanics and repairers such as industrial machinery mechanic and mechanical fitter.</p> <ul style="list-style-type: none"> <li>• Refer to qualifications for unit group and specific occupations in the unit group.</li> </ul> <p>Vertical articulation is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications for manufacturing engineering technicians.</li> <li>• Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>
<p><u>Port Manager:</u></p> <p>This qualification can articulate to qualifications related to occupations in the area of Harbour and Port Service.</p> <ul style="list-style-type: none"> <li>• Referring to qualifications in general</li> </ul>	<p><u>Port Manager:</u></p> <p>Horizontal articulation is possible to qualifications for other supply and distribution managers such as logistics manager and supply and distribution manager.</p> <ul style="list-style-type: none"> <li>• Refer to qualifications for unit group and specific occupations in the unit group.</li> </ul> <p>Vertical articulation is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications such as national diplomas or degrees in management</li> <li>• Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>
<p><u>Transport Coordinator:</u></p> <p>This qualification may articulate to other qualifications in the area of Transport, Operations and Logistics.</p> <ul style="list-style-type: none"> <li>• Referring to qualifications in general</li> </ul>	<p><u>Transport Coordinator:</u></p> <p>Horizontal articulation is possible to qualifications for other transport clerks</p> <ul style="list-style-type: none"> <li>• Refer to qualifications for the actual occupation (as transport coordinator is a specialisation).</li> </ul> <p>Vertical articulation is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications for supply and distribution managers such as road transport manager and fleet manager</li> <li>• Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>

### 6.3.4 Process 6.3.4: Prepare an outline on the assigned NQF level

Prepare an explanation or motivation on the assignment of the relevant NQF Level to the qualification. Calculate and reflect the total credit value per NQF Level to determine the credit value to be assigned to the qualification.

**Note 1:** Previous SAQA policies determined that at least 72 credits (60%) of a 120 credit qualification should be at or above the level of the qualification. Occupational qualifications will adhere to this rule. Therefore, 60% of the total credits of the qualification must be at or above the level of the qualification for any qualification with a total credit value of less than and up to 120 credits. For any qualification with a credit value of more than 120 credits, a minimum of 72 credits must be at or above the level of the qualification.

**Note 2:** There should be a relation between the NQF Level assigned to the qualification and the entry requirements, e.g. if NQF Level 6 is assigned to the qualification and the entry requirements is an NQF Level 4 qualification, then there should be NQF level 5 credits within the qualification, especially within the knowledge component.

The table below outlines the required credits at or above the level of the qualification for qualifications less than 120 credits.

Total Credits of Qualification	%	Number of Credits Required
25	60%	15
30	60%	18
35	60%	21
40	60%	24
45	60%	27
50	60%	30
60	60%	36
70	60%	42
75	60%	45
80	60%	48
85	60%	51
90	60%	54
95	60%	57
100	60%	60
105	60%	63
110	60%	66
115	60%	69
<b>120</b>	<b>60%</b>	<b>72</b>

## PROCESS 7: DEVELOP THE INTEGRATED EXTERNAL ASSESSMENT SPECIFICATIONS

All occupational qualifications will be assessed externally through a nationally standardised integrated summative assessment.

The external assessment specifications document provides guidelines on what will be assessed and how it will be assessed. The AQP will use the external assessment specifications document as a guide to develop nationally standardised assessment instruments to ensure the validity, consistency, quality and credibility of the actual external summative assessment.

The AQP will also use the external assessment specifications document to validate whether learners qualify for the external integrated summative assessment against the qualification or part qualification. Where applicable, it will also be used to validate eligibility requirements for phase tests.

The development process of the integrated external assessment specifications is led by the QDF or Learner QDF. The AQP is responsible for the content and sign off of the external assessment specifications document, but the DQP manages the communication with stakeholders, coordinates the working groups and provides administrative support to the QDF or Learner QDF on behalf of the AQP.

This process consists of:

- Process 7.1 Coordinate external assessment specifications working group meetings (DQP)
- Process 7.2 Develop the external assessment specifications document (QDF with AQP)

### 7.1 Process 7.1: Coordinate external assessment specifications working group meeting (DQP)

Process 7.1 is the responsibility of the DQP but must include the AQP. The DQP must arrange a working group meeting (at least two days – including the logistics) and ensure sufficient administrative support to the QDF including:

- a) Recordkeeping of attendance (pre-populated attendance register template attached as ANNEXURE A must be used);
- b) Ensuring alternates complete their relevant detail on attendance register; and
- c) Monitoring attendance and participation of experts.

**Note 1:** *It is not part of the functions of the QDF or learner QDF to provide administrative support. The QDF (unless a permanent staff member of the DQP) may not send out letters of invitation to stakeholders to participate in working group meetings as they do not have any authority in this regard. Such letters should go out*

on the responsible DQP's letterhead clearly indicating that it is the QCTO appointed DQP inviting participation.

**Note 2:** The AQP or proposed AQP must take ownership of this process and participation is a requirement.

**Note 3:** The QDF must communicate any difficulties to the DQP responsible officer to arrange additional expert practitioners (i.e. this working group must include members from the AQP).

## 7.2 Process 7.2: Develop the external assessment specifications document

The development of the external assessment document includes eight steps and requires the involvement of the AQP:

- |         |   |
|---------|---|
| Step D1 | Formulate the purpose of the qualification and part qualifications  |
| Step D2 | Identify integrated assessment focus areas and determine the weight   |
| Step D3 | Define associated assessment criteria for each integrated assessment focus area   |
| Step D4 | Reflect assignments to be evaluated externally  |
| Step D5 | Describe the external integrated assessment model   |
| Step D6 | Reflect the eligibility requirements to qualify for the external integrated summative assessment of the qualification (including Foundational Learning)                       |
| Step D7 | Reflect the eligibility requirements to qualify for the external integrated summative assessment for phase tests and/or part qualifications (including Foundational Learning) |
| Step D8 | Determine the criteria for the registration of assessors  |

The figure below provides a graphical illustration of the above mentioned process steps.

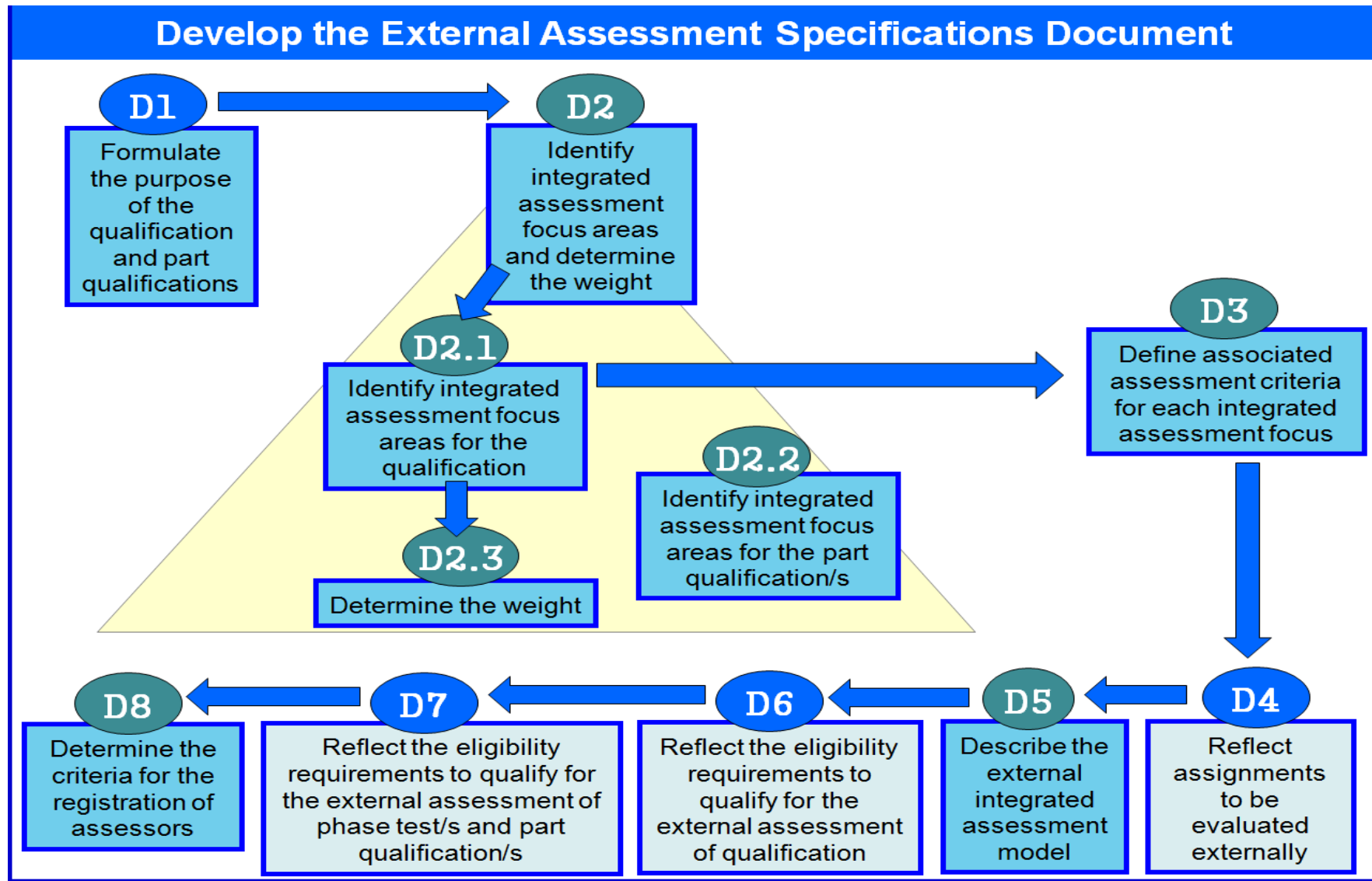


Figure 17: Steps for developing the assessment specifications

The content and structure of the external assessment specifications document is outlined below.

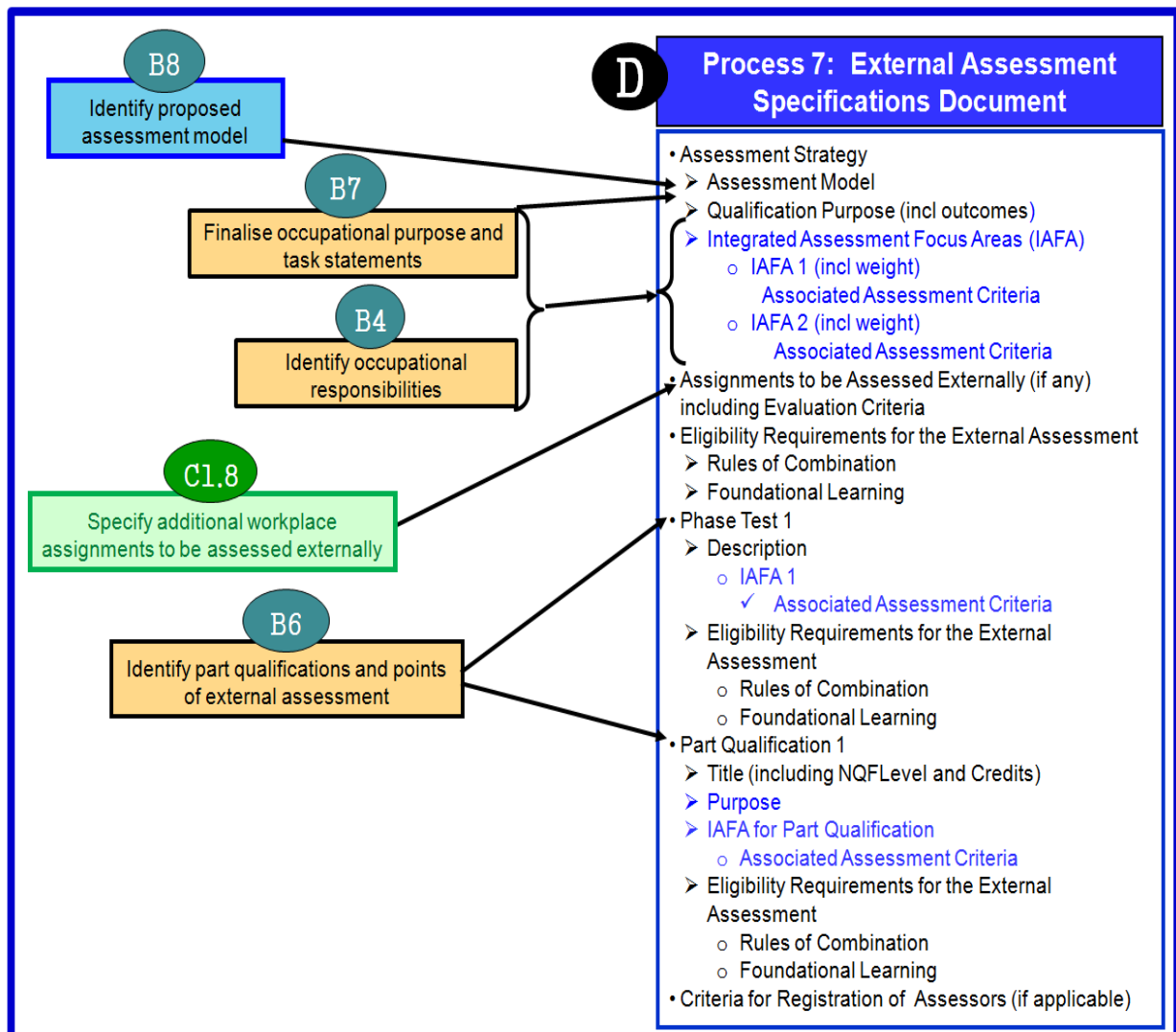


Figure 18: Content and structure of external assessment specifications document

## 7.2.1 Step D1: Formulate the purpose of the qualification and part qualifications

Step D1 includes:

- Step D1.1 Describe the purpose of the qualification
- Step D1.2 Describe the purpose of each phase test
- Step D1.3 Describe the purpose of each part qualification

### 7.2.1.1 Step D1.1: Formulate the purpose of the qualification

During Step D1.1, the occupational purpose developed during Step B7.3 and the associated task statements developed during Step B7.1, and amended during Process 4.3 are combined to become the qualification purpose.

Change the occupational purpose by starting the qualification purpose with the following standard sentence “The purpose of this qualification is to prepare a learner to operate as” followed by adding an “a” or “an” followed by the occupational or specialisation title. Each word in the title must start with a capital letter and must be in singular form.

Then reflect the exact occupational purpose statement identified during Step B7.3 and captured in the curriculum (see paragraph 9.2.1.6) to complete the paragraph.

Examples
<p><u>Fitter and Turner:</u> A Fitter and Turner fabricates metal parts and fits, assembles, maintains and repairs mechanical components, sub-assemblies and machines.</p>
<p><u>Plastics Manufacturing Machine Setter:</u> A Plastics Manufacturing Machine Setter manufactures plastics products through planning, preparing, setting-up and maintaining optimum machine settings on plastics production equipment</p>
<p><u>Port Manager:</u> A Port Manager plans, organizes, directs, controls and coordinates the operations of an airport or harbour.</p>
<p><u>Transport Coordinator:</u> A Transport Coordinator compiles and keeps records of transportation operations and coordinates the timing of passenger services.</p>

Then add the sentence, “A qualified learner will be able to:” followed by the occupational tasks developed during Step B7.1 and captured in the curriculum (see paragraph 9.2.1.6) including the reference to the NQF Level.

**Note:** No changes should be made to the occupational task statements, i.e. the wording must be exactly the same as in the curriculum.

### 7.2.1.2 Step D1.2: Formulate the purpose of each phase test

During Step D1.2, for each phase test identified and described during Step B6 the description is reviewed.

The sentence, “The purpose of this phase test is to determine the learner’s competence to” must be completed and then a reason must be provided.

Construction rules
<ul style="list-style-type: none"> <li>• Start with “The purpose of this phase test is to determine the learner’s” ...</li> <li>• Then add a descriptor such as “competence” or “knowledge” or “ability” followed by a description of what will be assessed.</li> <li>• Then add a reason why the assessment is necessary or the period when the assessment will take place.</li> </ul>



Examples
<ul style="list-style-type: none"> <li>• The purpose of this phase test is to determine the learner’s competence to prune. Assessment will be conducted during July in the pruning season.</li> <li>• The purpose of this phase test is to determine the learner’s knowledge in terms of blasting as required by the mine health and safety regulations as a prerequisite to obtaining a blasting certificate before commencing with the workplace component.</li> </ul>

### 7.2.1.3 Step D1.3: Formulate the purpose of each part qualification

During Step D1.3, for each part qualification identified during Step B6 the purpose identified during Step B7.3 is reviewed.

The sentence, “The purpose of this part qualification is to prepare a learner to operate as” is completed by adding an “a” or “an” followed by the “job” title determined during Step B6. Each word in the title must start with a capital letter and must be in singular form.

The lead sentence is followed by the purpose statement, identified during Step B7.2. (the actual “job” title in plural, followed by a key defining verb - without an “s”, to reflect what the person will be responsible for doing followed by the key product or service and a defining element of the occupational context where applicable to reflect “with what” or “to achieve what”).

**Note 1:** No reference is to be made to the actual occupation or specialisation of the main qualification (i.e. the qualification title must be omitted).

**Note 2:** For part qualifications no reference to what “A qualified learner will be able to:” do is required.

Construction rules
<ul style="list-style-type: none"> <li>• Start with “A” or “An” followed by the job title. Each word must start with a capital.</li> <li>• Then add the responsibility stated as a verb in singular present tense, i.e. with an “s” (to reflect what the person will be responsible for doing).</li> <li>• Then add the product or service.</li> <li>• Then add a defining element of the occupational context where applicable.</li> </ul>

Examples
<u>Fitter</u> : A Fitter fits mechanical components, sub-assemblies and machines.

### 7.2.2 Step D2: Identify the integrated assessment focus areas to be assessed externally and determine the weight

Step D2 includes:

- Step D2.1 Identify the integrated assessment focus areas to be assessed externally for the qualification and phase test and determine the weight.

Step D2.2 Identify the integrated assessment focus areas to be assessed externally for the part qualifications and determine the weight.

#### 7.2.2.1 Step D2.1: Identify the integrated assessment focus areas to be assessed externally for the qualification and phase tests and determine the weight

During Step D2.1 the integrated assessment focus areas to be assessed externally for the qualification and associated phase tests are identified. Integrated assessment focus areas specify what needs to be assessed in an integrated way in order to determine whether or not the learner can be declared competent in terms of the occupation or specialisation.

The occupational profile as a whole (including all elements thereof), developed during Steps B1- B7, as well as the purpose of the phase test described during Step D1.2 are considered when determining the integrated assessment focus areas to be assessed externally.

There is not necessarily a one on one relationship between the occupational tasks and the integrated assessment focus areas to be assessed externally. Elements identified from more than one occupational task can be combined as an integrated assessment focus area. More than one integrated assessment focus area may be necessary per task to reflect the full scope of complexity of what has to be assessed and to provide for phase tests where relevant.

There must however be a clear relation between occupational tasks and the integrated assessment focus areas, i.e. words used in the integrated assessment focus areas must also appear in the occupational task statements. Tasks reflect the highest level occupational responsibility in an aggregated way. All elements thereof are not necessarily visible and tasks might require a rephrasing to reflect the actual responsibilities, or can be broken up to accommodate different responsibilities.

The SAQA level descriptors must be used to identify wording that can be used to reflect the complexity of the integrated assessment focus areas.

**Note 1:** *The integrated assessment focus areas will be reflected as exit level outcomes in the qualification document. The integrated focus areas should thus have a clear relationship to the purpose of the qualification, which contains the occupational tasks.*

**Note 2:** *The integrated assessment focus areas must not be stated as assessment tasks, e.g. including standards such as "according to the manufacturer's specifications" or "according to company standards". The assessment criteria will indicate how competence is to be determined.*

## Process Question

### With reference to the qualification profile, ask:

- “What are the critical aspects of the occupational profile that must be externally assessed?”
- “What would be the core focus of this assessment?”

Or

- “What should the person be able to do or demonstrate to prove competence?”
- “What must be done? Then “with what?” then “To achieve what?”

### With reference to the phase test, ask:

- “Which critical aspects of the occupational profile must be assessed during the phase tests?”
- “What would be the core focus of this assessment?”

Or

- “What should the person be able to do or demonstrate to prove competence at this stage?”

### With reference to each integrated assessment focus area identified, ask:

- “What is the weight that this focus area at must bear in terms of the total external assessment?”

## Construction Rules

- Start the sentence with a verb in its simplest form (without an “s”), to describe what the learner has to do.
- Then add a noun to describe “to what” or “with what”
- Then describe the “how”, i.e. “by doing what” or “using what”.
- Then add the weight as a percentage in brackets.

## Examples

### Fitter and Turner:

**Task Statement:** Perform engineering maintenance on mechanical components, subassemblies and machines (NQF Level 3)

**IAFA:** Identify and repair or replace out-of specification or mal-functioning components and sub-assemblies in mechanical machines to restore the machines to manufacturer’s specifications.

### Plastics Manufacturing Machine Setter:

**Task Statement:** Set-up and run plastics manufacturing machinery and equipment (NQF Level 4)

**IAFA 1:** Set up or programme and run plastics machinery to manufacture plastics products (40%)

**IAFA 2:** Prepare raw materials for the manufacturing of specified products (15%)

### Port Manager:

**Task Statement:** Maintain port support operations (NQF Level 6)

**IAFA:** Maintain port customer services and infrastructure support (25%)

### Transport coordinator:

**Task Statement:** Plan and prepare transport schedules (NQF Level 4)

**IAFA:** Determine customer and vehicle needs and prepare schedule and required documentation (50%)

**Note 3:** Ensure that the wording used reflects the complexity of what needs to be assessed by using the SAQA level descriptors.

**Note 4:** Ensure that the related occupational task is clearly recognisable in the statement.

**Note 5:** The integrated assessment focus area should not be an exact restatement of the occupational task as reflected under the purpose statement unless there is only one occupational responsibility associated with that task.

**Note 6:** The integrated assessment focus area must be phrased to be consistent with the assessment model.

**Note 7:** The total of the percentages allocated to individual assessment focus areas must add up to 100%.

Not this	But rather this
Starting with “The ability to” The ability to repair, install and commission sub-assemblies and machines (40%)	Repair, install and commission sub-assemblies and machines (40%)
<p><b>Task Statement:</b> Perform engineering maintenance on mechanical components, sub-assemblies and machines (NQF Level 3)</p> <p><b>Occupational responsibilities</b> relate to disassembling, cleaning and inspection of mechanical sub-assemblies as well as the replacement of components and sub-assemblies.</p> <p><b>Integrated assessment focus area:</b> Perform engineering maintenance on mechanical components, sub-assemblies and machines.</p> <ul style="list-style-type: none"> <li>This is simply a restatement of the task and does not reflect the associated responsibilities.</li> </ul>	<p>IAFA 1: Inspect and repair or replace out-of specification or faulty components and sub-assemblies in mechanical components, sub-assemblies and machines.</p> <p>Reflect what the learner has to do to “the what” to achieve “what” during the assessment process</p>

<p><b>Task Statement:</b> Set-up and run plastics manufacturing machinery and equipment (NQF Level 4)</p> <p><b>Occupational responsibilities</b> relate to handling, storing and recycling of material and start up, shut down, set-up or programme and monitor machinery.</p> <p><b>Integrated assessment focus areas:</b></p> <p>IAFA 1: Safely set-up, programme, start-up, optimise and shut-down the machine and auxiliary equipment (40%)</p> <p>And</p> <p>IAFA 2: Plan and prepare raw materials for manufacture (15%)</p> <ul style="list-style-type: none"> <li>• The relation between these two IAFAs and the task statement is not obvious</li> <li>• “Safely” is an assessment criterion.</li> </ul>	<p>IAFA 1: Set up or programme and run plastics machinery to manufacture <u>specified</u> plastics products (40%)</p> <ul style="list-style-type: none"> <li>• Refer to type of products in order to create a link to IAFA 2</li> </ul> <p>IAFA 2: Prepare raw materials for the manufacturing of specified products (15%)</p>
<p><b>Task Statement:</b> Maintain port support operations (NQF Level 6)</p> <p><b>Occupational responsibility.</b> There is only one responsibility. The practical skills however address customer services and infrastructure.</p> <p><b>Integrated assessment focus area:</b></p> <p><u>IAFA:</u> Maintain port support operations (25%)</p> <ul style="list-style-type: none"> <li>• This is simply a restatement of the task. Even though there is only one occupational responsibility, the practical skills reflect the areas of importance (this is also confirmed by the associated assessment criteria) that can better describe the IAFA.</li> </ul>	<p><u>IAFA:</u> Maintain port customer services and infrastructure support (25%)</p>
<p><b>Task Statement:</b> Plan and prepare transport schedules (NQF Level 4)</p> <p><b>Occupational responsibility.</b> There is only one responsibility. The practical skills however address the interpretation of customer needs and preparation of required documentation</p> <p><b>Integrated assessment focus area:</b></p> <p>Plan and prepare transport schedules (50%)</p> <ul style="list-style-type: none"> <li>• This is simply a restatement of the task. Even though there is only one occupational responsibility, the practical skills reflect the areas of importance (this is also confirmed by the associated assessment criteria) that can better describe the IAFA.</li> </ul>	<p><u>IAFA:</u> Determine customer and vehicle needs and prepare transport schedules and required documentation (50%)</p>

### 7.2.2.2 Step D2.2: Identify additional integrated assessment focus areas to be assessed externally for the part qualifications and add the weight

During Step D2.2 the integrated assessment focus areas to be assessed externally for each part qualification described during Step D1.3 are identified.

The purpose of the part qualification must be considered and the same construction rules must be followed as specified in Step D2.1 above.

**Note:** Learners who have completed a part qualification and then apply for assessment against the qualification at a later stage will do the same assessment as learners who did not complete part qualifications. All integrated assessment focus areas will be covered in the final integrated assessment for the qualification.

### 7.2.3 Step D3: Define associated assessment criteria for each integrated assessment area

Step D3 includes:

- Step D3.1 Define the associated assessment criteria for each integrated assessment focus area for the qualification and phase test.
- Step D3.2 Link associated assessment criteria to each integrated assessment focus area for the part qualification.

#### 7.2.3.1 Step D3.1: Define the associated assessment criteria for each integrated assessment focus area for the qualification and phase test

During Step D3.1, the associated assessment criteria for each integrated assessment focus area for the qualification and phase test are specified. Assessment criteria specify what the learner must know and do to demonstrate proficiency. Each integrated assessment focus area should have at least 3 associated assessment criteria.

The assessment criteria should not be a repetition of assessment criteria for the internal assessments as specified in the curriculum components.

The assessment criteria should reflect the evidence that the qualifying learner has to produce to reflect the acquisition of the required expertise. This expertise should reflect:

- Applied competence.
- Theoretical and applied knowledge enhanced by experience.

The assessment criteria should reflect the level of complexity of the relevant exit level outcome and provide the Assessment Quality Partner with sufficient guidelines for developing particular assessment instruments.

**Note 1:** Where part qualifications have been identified, care should be taken to ensure the assessment specifications are reflected in such a way that some can be

assigned to the part qualification as no additional assessment criteria should be developed for part qualifications. The identified assessment criteria are considered and allocated to the part qualification.

**Note 2:** Assessment criteria should not be reflected as tasks. They must reflect the evidence to be provided.

- Process Question**      **With reference to each Integrated assessment focus area, ask:**
- “What is the evidence that must be produced to be evaluated?”
  - “What are the characteristics (quality criteria) that assessors will use to judge the quality of the evidence?”

Construction Rules
<ul style="list-style-type: none"> <li>• Start the sentence with a verb in its simplest form (without an “s”), to describe what the learner has to do.</li> <li>• Then add a noun to describe “to what” or “with what”</li> <li>• Then describe the “how”, i.e. “by doing what” or “using what”.</li> <li>• Then add the weight as a percentage in brackets.</li> </ul>

Examples
<p><u>Fitter and Turner:</u></p> <p><b>Task Statement:</b> Perform engineering maintenance on mechanical components, subassemblies and machines (NQF Level 3)</p> <p><b>IAFA:</b> Identify and repair or replace out-of specification or mal-functioning components and sub-assemblies in mechanical machines to restore the machines to manufacturer’s specifications.</p> <p><u>Plastics Manufacturing Machine Setter:</u></p> <p><b>Task Statement:</b> Set-up and run plastics manufacturing machinery and equipment (NQF Level 4)</p> <p><b>IAFA 1:</b> Set up or programme and run plastics machinery to manufacture plastics products (40%)</p> <p><b>IAFA 2:</b> Prepare raw materials for the manufacturing of specified products (15%)</p> <p><u>Port Manager:</u></p> <p><b>Task Statement:</b> Maintain port support operations (NQF Level 6)</p> <p><b>IAFA:</b> Maintain port customer services and infrastructure support (25%)</p> <p><u>Transport coordinator:</u></p> <p><b>Task Statement:</b> Plan and prepare transport schedules (NQF Level 4)</p> <p><b>IAFA:</b> Determine customer and vehicle needs and prepare schedule and required documentation (50%)</p>

Not this	But rather this
<p>Starting with “The ability to”</p> <p>The ability to repair, install and commission sub-assemblies and machines (40%)</p>	<p>Repair, install and commission sub-assemblies and machines (40%)</p>
<p><b>Task Statement:</b> Perform engineering maintenance on mechanical components, sub-assemblies and machines (NQF Level 3)</p> <p><b>Occupational responsibilities</b> relate to disassembling, cleaning and inspection of mechanical sub-assemblies as well as the replacement of components and sub-assemblies.</p> <p><b>Integrated assessment focus area:</b></p> <p>Perform engineering maintenance on mechanical components, sub-assemblies and machines.</p> <ul style="list-style-type: none"> <li>This is simply a restatement of the task and does not reflect the associated responsibilities.</li> </ul>	<p>IAFA 1: Inspect and repair or replace out-of-specification or faulty components and sub-assemblies in mechanical components, sub-assemblies and machines.</p> <p>Reflect what the learner has to do to “the what” to achieve “what” during the assessment process</p>
<p><b>Task Statement:</b> Set-up and run plastics manufacturing machinery and equipment (NQF Level 4)</p> <p><b>Occupational responsibilities</b> relate to handling, storing and recycling of material and start up, shut down, set-up or programme and monitor machinery.</p> <p><b>Integrated assessment focus areas:</b></p> <p>IAFA 1: Safely set-up, programme, start-up, optimise and shut-down the machine and auxiliary equipment (40%)</p> <p>And</p> <p>IAFA 2: Plan and prepare raw materials for manufacture (15%)</p> <ul style="list-style-type: none"> <li>The relation between these two IAFAs and the task statement is not obvious</li> <li>“Safely” is an assessment criterion.</li> </ul>	<p>IAFA 1: Set up or programme and run plastics machinery to manufacture <u>specified</u> plastics products (40%)</p> <ul style="list-style-type: none"> <li>Refer to type of products in order to create a link to IAFA 2</li> </ul> <p>IAFA 2: Prepare raw materials for the manufacturing of specified products (15%)</p>



<p><b>Task Statement:</b> Maintain port support operations (NQF Level 6)</p> <p><b>Occupational responsibility.</b> There is only one responsibility. The practical skills however address customer services and infrastructure.</p> <p><b>Integrated assessment focus area:</b></p> <p><u>IAFA:</u> Maintain port support operations (25%)</p> <ul style="list-style-type: none"> <li>• This is simply a restatement of the task. Even though there is only one occupational responsibility, the practical skills reflect the areas of importance (this is also confirmed by the associated assessment criteria) that can better describe the IAFA.</li> </ul>	<p><u>IAFA:</u> Maintain port customer services and infrastructure support (25%)</p>
<p><b>Task Statement:</b> Plan and prepare transport schedules (NQF Level 4)</p> <p><b>Occupational responsibility.</b> There is only one responsibility. The practical skills however address the interpretation of customer needs and preparation of required documentation</p> <p><b>Integrated assessment focus area:</b></p> <p>Plan and prepare transport schedules (50%)</p> <ul style="list-style-type: none"> <li>• This is simply a restatement of the task. Even though there is only one occupational responsibility, the practical skills reflect the areas of importance (this is also confirmed by the associated assessment criteria) that can better describe the IAFA.</li> </ul>	<p><u>IAFA:</u> Determine customer and vehicle needs and prepare transport schedules and required documentation (50%)</p>

### 7.2.3.2 Step D3.2: Link associated assessment criteria to each integrated assessment focus area for the part qualification

During Step D3.2 the associated assessment criteria identified during Step D3.1 are linked to the relevant integrated assessment focus area identified for the particular part qualification during Step D2.2.

### 7.2.4 Step D4: Reflect assignments to be evaluated externally

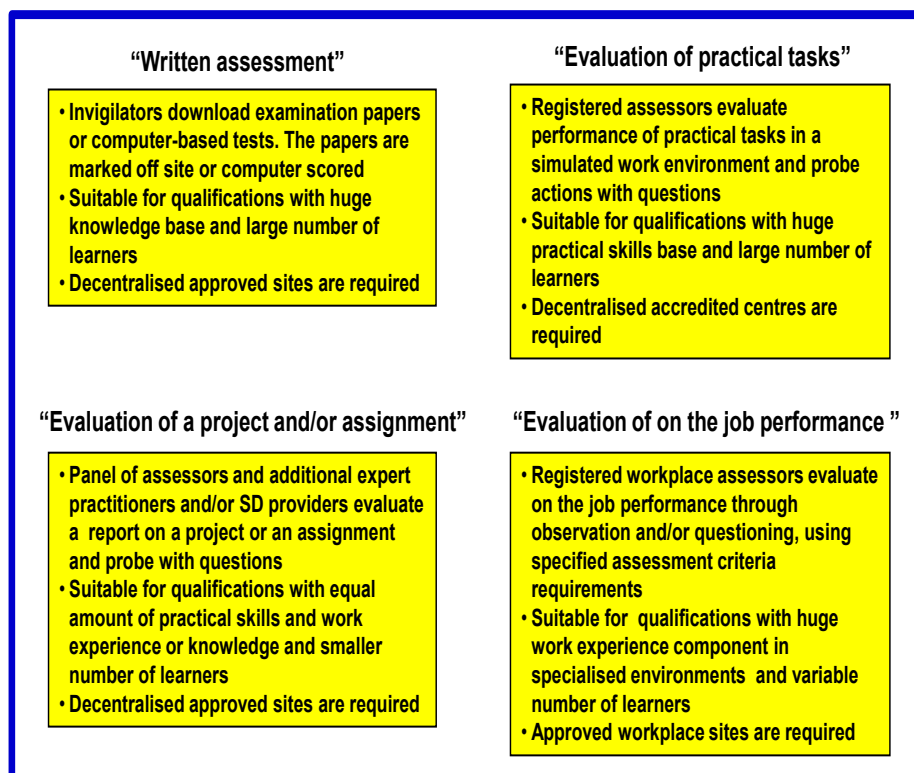
Workplace assignments that must be completed whilst at the workplace and that must be assessed externally as part of the integrated external summative assessment are identified during Step C1.8 (Process 6.2.1.8).

## 7.2.5 Step D4: Describe the external integrated assessment model

During Step D5 the external integrated summative assessment model identified during Step B8 and approved during the verification of the occupational profile is finalised.

After having identified the exit level outcomes and associated assessment criteria for the qualification and part qualification the initially identified assessment model should be reconfirmed and changed if required.

The four most common models are summarised in Figure 7 below. There are however other possibilities, including combining elements of more than one of these models.



**Figure 8: The four most common models for assessment**

The essence of the model to be used must be recorded in a short paragraph.

<p><b>Process Question</b></p>	<p><b>With reference to the integrated assessment focus areas and associated assessment criteria, ask:</b></p> <ul style="list-style-type: none"> <li>• “Is the model as identified still the most appropriate and cost effective way to determine learner competence?”</li> <li>• “What changes need to be made to ensure that the intended assessments can be applied?”</li> <li>• “Are there any phase tests and/or assignments to be evaluated externally that must be reflected in the assessment model?”</li> </ul>
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**Note1:** Phase tests (where applicable) must be described as part of the overall assessment model. It must also be specified whether or not exit level outcomes identified for phase tests will be re-assessed during the final external assessment.

**Note2:** Assignments to be evaluated externally (where applicable) must be described as part of the overall assessment model.

Construction Rules
<ul style="list-style-type: none"> <li>• Start with the phrase “An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.”</li> <li>• Then add another paragraph by referring to the method, e.g. a written assessment, on the job evaluation, combination of a written test and a practical evaluation, etc.</li> <li>• Then make reference to where the assessment will happen, e.g. registered assessment sites, at workplaces.</li> <li>• Then make a reference to who will evaluate the assessment, e.g. registered assessors, invigilators, etc and who will be responsible for their registration or appointment.</li> </ul>

Examples
<ul style="list-style-type: none"> <li>• An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.</li> <li>• The assessment will be conducted by means of a written examination at decentralised approved assessment sites and marked by staff appointed by the relevant AQP.</li> </ul>

**Note 3:** In the case of an occupation listed as a trade the following wording must be used after inserting the number of days: “The external integrated assessment will be conducted through a trade test as prescribed under section 26 D of the Skills Development Act and defined in the Trade Test Regulations. It will be conducted through an evaluation of written and practical tasks covering critical aspects in a simulated environment at an assessment centre accredited by QCTO and conducted by an assessor registered by the National Artisan Moderation Body (NAMB). The assessment will take place over a minimum of \_\_\_\_ days.”

### 7.2.6 Step D6: Reflect the eligibility requirements to qualify for the external integrated summative assessment of the qualification (including Foundational Learning)

During Step D6 the eligibility requirements for the occupational qualification are reflected. Eligibility requirements refer to the requirements that must be met by a learner to qualify for the integrated external summative assessment and is a list of all required modules, exemptions to the modules and Foundational Learning where applicable.

The learner must be able to prove that he/she has been assessed (including RPL assessments) by an accredited skills development provider for the knowledge and

practical skill modules (as per the assessment criteria stipulated in the module specifications), or has successfully completed other learning programmes or qualifications identified as exemptions therefore and has completed the work experience modules related to the qualification.

A statement of results for all the required modules of the knowledge and practical skills curriculum components relating to the qualification as well as a completed statement of work experience (logbook) will serve as such proof and must be submitted to the AQP when applying for the integrated external summative assessment.

The occupational qualification capturing tool automatically populates this section.

### **7.2.7 Step D7: Reflect the eligibility requirements to qualify for the external integrated summative assessment for phase tests and/or part qualifications (including Foundational Learning)**

During Step D7 the eligibility requirements for each part qualification or phase test are reflected. Eligibility requirements refer to the requirements that must be met by a learner to qualify for the integrated external summative assessment for the part qualification or phase and is a list of all required modules, exemptions to the modules and Foundational Learning where applicable.

The learner must be able to prove that he/she has been assessed (including RPL assessments) by an accredited skills development provider for the knowledge and practical skill modules (as per the assessment criteria stipulated in the module specifications), or has successfully completed other learning programmes or qualifications identified as exemptions therefore and has completed the work experience modules related to the qualification.

A statement of results for all the required modules of the knowledge and practical skills curriculum components relating to the part qualification or phase as well as a completed statement of work experience (logbook) will serve as such proof and must be submitted to the AQP when applying for the integrated external summative assessment for the part qualification or phase.

For each phase test and part qualification, the eligibility requirements outlined in Step 6 can be copied and those modules not required may be deleted. The same applies with regard to part qualifications.

### 7.2.8 Step D8: Determine the criteria for the registration of assessors (if required)

During Step D8, the criteria to be met for registration as assessors for the particular qualification must be specified.

Note: Criteria for the registration of assessors is only a requirement where the external final summative assessment will be conducted in an accredited assessment centres.

#### Process Question

With regards to the assessment standards, ask:

- “What is the experience, the context of the experience and the qualifications that the person must have in order to be registered as an assessor?”

#### Construction rules

Provide information on the following:

- Subject matter expertise.
- Years of practice.
- Assessment experience.
- Membership of a Professional Body.
- Legal requirements.

#### Examples

- Expertise: Practicing plumber
- Years of practice: 5 years
- Assessment Experience: Assessment Unit Standards
- Membership of a Professional Body: None
- Legal Requirements: None

## **PROCESS 8: MANAGE VERIFICATION PROCESS (CURRICULUM AND EXTERNAL ASSESSMENT SPECIFICATIONS)**

Process 8 is managed by the DQP, but requires inputs from the QDF and consists of:

- Process 8.1 Prepare inputs for verification to the DQP (QDF)
- Process 8.2 Manage verification of curriculum and assessment specifications document (DQP)
- Process 8.3 Process comments received on curriculum and assessment specifications document and finalise inputs for DQP Process Report (QDF)

### **8.1 Process 8.1: Prepare the curriculum and assessment specifications for verification**

During Process 8.1 the curriculum as well as the assessment specifications document is submitted to the DQP for verification with stakeholders. Inputs required for the finalisation of the qualification that need stakeholder signoff are also prepared.

The wording used and captured during working group meetings is checked against the construction rules and taking into consideration all pitfalls, tips and notes reflected in this manual (see Process 9.2.1 as a quick reference).

Where a learner QDF was involved the QDF must check the documents for compliance before submitting them to the DQP.

The documents can be in word format and include the following.

- Process 8.1.1 Prepare the curriculum for verification
- Process 8.1.2 Prepare the assessment specifications document for verification

#### **8.1.1 Process 8.1.1: Prepare the curriculum for verification**

Content that must be circulated for public comment includes:

- a) Curriculum title.
- b) Alternative titles used by industry for the occupation.
- c) Information on entry requirements.
- d) The occupational profile.
  - i Occupational purpose.  
Starting with the actual occupation or job title in plural, followed by a verb/s in its simplest form, i.e. without an “s” and then the context/s.
  - ii Occupational tasks.

Starting with a verb in its simplest form, i.e. without an “s”, followed by a product or service and then an occupational context where applicable and the NQF level.

- iii Details of the occupational task.
  - Product or service (only one per task).
    - Stated as a noun or phrase and can have an adjective but no verb must be used and should not be reflected as something that has been achieved.
  - Occupational responsibilities (can be more than one per task).
    - Starting with a verb in its simplest form, i.e. without an “s”, followed by a noun/s to describe the product / service or building block.
  - Occupational contexts (can be more than one per task).
    - Starting with a verb in its simplest form, i.e. without an “s”, followed by a description of the relevant experience in plural.
- e) List of all modules (name, NQF Level, learning contract time and credits).
- f) All module specifications including provider programme accreditation requirements for the knowledge component.

### **8.1.2 Process 8.1.2: Prepare the assessment specifications document for verification**

Content that must be circulated for public comment includes:

- a) Assessment model.
- b) Qualification information.
  - i) Qualification title (including NQF level and credits).
  - ii) Qualification purpose.
  - iii) Integrated assessment focus areas and associated assessment criteria.
  - iv) Rules of combination.
  - v) Phase test (if applicable).
    - Description.
    - Rules of combination
- c) Part qualification information.
  - i) Part qualification title (including NQF level and credits).
  - ii) Part qualification purpose.
  - ii) Integrated assessment focus areas and associated assessment criteria.
  - iv) Rules of combination.

## 8.2 Process 8.2: Manage verification of curriculum and assessment specifications (DQP)

Process 8.2 is the responsibility of the DQP. The DQP is responsible for the management of this process and must distribute the occupational profile, curriculum and assessment specifications, collect and collate the feedback received and arrange a working group meeting to consider comments.

The DQP must also consult with all SETAs with registered qualifications or learning programmes on the replacement thereof.

Once comments have been received the DQP must collate the inputs, provide them to the QDF and arrange a working group meeting to consider inputs (if required).

**Note 1:** *It is not part of the functions of the QDF or learner QDF to distribute the occupational profile, curriculum and assessment specifications for comment or to collate information on feedback received. The QDF (unless a permanent staff member of the DQP) has no authority to communicate with stakeholders. Any communication to stakeholders should go out on the responsible DQP's letterhead clearly indicating that it is the QCTO appointed DQP inviting feedback.*

**Note 2:** *It is not part of the functions of the QDF or learner QDF to negotiate on the replacement of existing qualifications.*

## 8.3 Process 8.3: Integrate comments received on curriculum and assessment specifications document

During Process 8.3, a working group meeting with experts (if required) is facilitated by the QDF to consider the inputs received, make the agreed changes to the curriculum and assessment specifications and prepare a report on how the comments were dealt with.

The report on how comments were dealt with must be forwarded to the DQP for inclusion in the process report.



## **PROCESS 9: SUBMIT CURRICULUM, ASSESSMENT SPECIFICATIONS, QUALIFICATION AND PROCESS REPORT**

This process consists of:

- Process 9.1 Obtain final input from DQP (QDF)
- Process 9.2 Capture the curriculum, assessment specifications and qualification (QDF)
- Process 9.3 Finalise the process report (DQP)

### **9.1 Process 9.1: Obtain final input from DQP**

During process 9.1 the QDF must obtain the information on qualifications and learning programmes to be replaced from the DQP.

### **9.2 Process 9.2: Capture the curriculum, assessment specifications and qualification information**

#### **9.2.1 Process 9.2.1: Capture the curriculum**

During process 9.2.1, the curriculum is captured using the electronic occupational qualification capturing tool. The content must be checked against the construction rules and taking into consideration all pitfalls, tips and notes reflected in this manual and summarised below as a quick reference.

##### **9.2.1.1 OFO code**

Capture the 6 digit OFO code of the related occupation.

##### **9.2.1.2 OFO Title**

Capture the exact OFO title of the occupation or related occupation in case of the qualification being developed for a specialisation. The title must be exactly the same as on the OFO and every new word must start with a capital.

##### **9.2.1.3 Curriculum code**

Capture the three digit code of the curriculum. If the qualification is addressing the actual occupation the code must be "000". If the curriculum is for a specialisation and it is the first specialisation for which a curriculum is to be developed the code must be "001". The code should have been allocated by the QCTO and should appear on the SLA schedule 1 of which you should have obtained a copy from the DQP. If no code has been allocated for the curriculum, it must be confirmed with the QCTO.

#### 9.2.1.4 Curriculum title

Capture the OFO title and in the case of the qualification being developed for a specialisation, the specialisation title must follow in a bracket.

The following rules must be applied:

- Exact occupational title (check the OFO and remember every new word must start with a capital).
  - If a specialisation is included, leave a space, followed by a bracket and
- Specialisation title and a bracket.
  - The first specialisation must always conform to “occupational speak” i.e. I am a xxxx and every new word must start with a capital followed by a bracket, but
  - In the case of a further specialisation, the specialisation title must be followed by a colon and space and a reference to the specific context (i.e. economic sector or learning field or situation, e.g. above ground, mining, electrical).

#### 9.2.1.5 Alternative titles

Capture any alternative titles used by Industry for the same specialisation, if any. Every word must start with a capital (see Step B9.1)

#### 9.2.1.6 Occupational purpose

Capture the occupational purpose as finalised during Step B7.3 (Process 3.3.7.3).

Construction Rules
<ul style="list-style-type: none"><li>• Start with “A” or “An” followed by the actual occupational, specialisation or job title. Each word must start with a capital.</li><li>• Then add the highest level responsibilities stated as a verb in singular present tense, i.e. with an “s” (to reflect what the person will be responsible for doing).</li><li>• Then add the product/s or service/s.</li><li>• Then add a defining element of the occupational context where applicable</li></ul>

Examples
<p><u>Fitter and Turner:</u> A Fitter and Turner fabricates metal parts and fits, assembles, maintains and repairs mechanical components, sub-assemblies and machines.</p> <p><u>Plastics Manufacturing Machine Setter:</u> A Plastics Manufacturing Machine Setter manufactures plastics products through planning, preparing, setting-up and maintaining optimum machine settings on plastics production equipment.</p> <p><u>Port Manager:</u> A Port Manager plans, organizes, directs, controls and coordinates the operations of an airport or harbour.</p> <p><u>Transport Coordinator:</u> A Transport Coordinator compiles and keeps records of transportation operations and</p>

coordinates the timing of passenger services.

**Note:** In the case of the qualification being developed for a specialisation, only the specialisation title must be captured, e.g. not Transport Clerk (the occupation), neither the qualification title, i.e. Transport Clerk (Transport Coordinator) but the actual specialisation, i.e. Transport Coordinator

Not this	But rather this
<p>A Plastics Manufacturing Machine Setter manufactures plastics products through <u>planning, preparing</u> and setting-up and maintaining optimum machine <u>outputs in various types of volume manufacturing processes.</u></p> <ul style="list-style-type: none"> <li>• Too much detail and convoluted</li> </ul>	<p>A Plastics Manufacturing Machine Setter manufactures plastics products through setting-up and maintaining optimum machine settings on plastics production equipment.</p>
<p>A Transport <u>Clerk</u> compiles and keeps records of operational aspects and coordinates the timing of passenger services <u>in accordance to a schedule, contract and/or private hire,</u> and prepares reports for management.</p> <ul style="list-style-type: none"> <li>• “in accordance to” is detailed information at responsibility and work experience level.</li> <li>• Reporting is a general activity performed by many occupations and is not unique to this occupation.</li> </ul>	<p>A Transport <u>Coordinator</u> compiles and keeps records of transportation operations and coordinates the timing of passenger services.</p>

### 9.2.1.7 Occupational tasks and level

Capture the occupational tasks formulated during Step B7.1 (Process 3.3.7.1). and assign an NQF level as determined during Step B7.2 (Process 3.3.7.2).

**Note:** The NQF level must be indicated in the curriculum.

Construction Rules
<ul style="list-style-type: none"> <li>• Start with the highest level responsibilities stated as a verb in its simplest form, i.e. without an “s”.</li> <li>• Then add the product or service.</li> <li>• Then add a defining element of the occupational context where applicable.</li> <li>• Then add the NQF level in brackets.</li> </ul>

Examples
<p><u>Fitter and Turner:</u> Perform engineering maintenance on mechanical components, subassemblies and machines (NQF Level 3)</p> <p><u>Plastics Manufacturing Machine Setter:</u> Set up and run plastics manufacturing machinery and equipment. (NQF Level 4)</p> <p><u>Port Manager:</u> Maintain port support operations (NQF Level 6)</p> <p><u>Transport Coordinator:</u> Plan and prepare transport schedules (NQF Level 4)</p>

Not this	But rather this
Apply hand skills to fabricate mechanical components using engineering tools. <ul style="list-style-type: none"> <li>It is not “Hand skills” that are used, but “hand tools”.</li> </ul>	Fabricate mechanical components using hand tools. <ul style="list-style-type: none"> <li>Reflect the actual task</li> </ul>
Manufacture plastic products <ul style="list-style-type: none"> <li>The setter does not “Manufacture” the machine does that.</li> </ul>	Set up and run plastics manufacturing machinery and equipment <ul style="list-style-type: none"> <li>Reflect the actual task.</li> </ul>
<u>Perform</u> job analyses and establish job requirements <u>by observing and interviewing employees and managers</u> <ul style="list-style-type: none"> <li>Use “perform” and “conduct” sparingly,</li> <li>Explaining how the task is to be done (this will form part of the content in the module)</li> </ul>	Analyse jobs and establish job requirements` <ul style="list-style-type: none"> <li>Reflect what the person actually has to “do”.</li> </ul>
Generalising the task to such an extent that the uniqueness of the occupation is no longer evident, e.g. “Compile management reports”	Use words and expressions which are unique to that occupation, or qualify generic words with occupational specific modifiers, i.e. augment with indicative objects or activities with instances, e.g. ‘such as’ and ‘by’ or the purpose, e.g. ‘to’. E.g. “Compile management reports on transport statistics”
Reflecting developmental tasks, i.e. reflecting the same product or service in two different tasks, e.g. “Manage the budgetary process....” and “Supervise the budgetary process....”	Only reflect the highest level responsibility as a task, e.g. “Manage the budgetary process....”
Listing all responsibilities (including developmental responsibilities, or outcomes during the learning process) instead of only highest level responsibilities, e.g. “Collect and analyse operational data and statistics, identify potential areas of improvement and compile recommendations....”	Only reflect the highest level responsibilities toward a specific product or service, e.g. “Analyse and report on operational data and statistics .....”

### 9.2.1.8 Occupational task detail

For each occupational task, capture the product or service, occupational responsibilities and occupational contexts.

#### Unique Product or service

Capture the product or service for each task identified during Step B3.1 Process 3.3.3.1).

Construction Rules
<ul style="list-style-type: none"> <li>Specify the physical or digital objects produced or the service rendered.</li> <li>A product can be stated as a noun or phrase and can have an adjective. No verb must be used.</li> </ul>

Examples
<u>Fitter and Turner</u> : Operational machinery
<u>Plastics Manufacturing Machine Setter</u> : Plastics production equipment producing products
<u>Port Manager</u> : Efficient port support operations
<u>Transport Coordinator</u> : Transport schedules

**Note:** Do not state the product or service as something that has been achieved.

Not this	But rather this
Machine and auxiliary equipment, set-up, programmed, start-up, monitored and shut-down according to procedure. <ul style="list-style-type: none"> <li>These are all activities that contribute to the overall outcome.</li> </ul>	Plastics production equipment producing products <ul style="list-style-type: none"> <li>This is what the setter leaves behind after the task has been completed.</li> </ul>
Transport schedule prepared <ul style="list-style-type: none"> <li>Preparing is part of the activity.</li> </ul> or Prepared transport schedule <ul style="list-style-type: none"> <li>It is not necessary to state that it has been prepared.</li> </ul>	Transport schedules <ul style="list-style-type: none"> <li>This is what the clerk hands over on completion of the task.</li> </ul>
Using generalised words which could apply to any occupation or job, e.g. raw materials.	Select the common words used for the type of raw material, e.g. plastic pellets, or plastic raw materials.
Adding verbs to products, e.g. Advice provided on labour relations	Advice on labour relations
Describing the quality or conformance requirements of the product e.g. concrete slab laid according to site-specific standards	Restrict the item or phrase to the key output, product or service, e.g. Concrete slab

### Responsibilities

Capture occupational responsibilities (see Step B4.1). Remember this will become the title of a practical skill module.

Construction Rules
<ul style="list-style-type: none"> <li>Identify a word or phrase that best describes the overall responsibility or function of a person towards the delivery of the product or service.</li> <li>Start with a verb in its simplest form, i.e. without an “s”.</li> <li>Then add a description of the “what” in <b>plural</b>, i.e. a noun/s to describe the product / service or building block.</li> </ul>

Examples
<p><u>Fitter and Turner</u>: Replace components and sub-assemblies and assemble machines</p> <p><u>Plastics Manufacturing Machine Setter</u>: Set-up, programme and shut-down machinery and auxiliary equipment</p> <p><u>Port Manager</u>: Maintain port support operations</p> <p><u>Transport Coordinator</u>: Plan and prepare transportation schedules</p>

Not this	But rather this
<p>Ensure compliance within the regulatory and legislative frameworks for airports and harbours.</p> <ul style="list-style-type: none"> <li>• “Ensure” is a generalised term which does not describe the actual activity to be learned</li> </ul>	<p>Determine/assess/verify/monitor regulatory and legislative compliance of ...</p> <p>OR</p> <p>Identify and respond to regulatory and legislative non-compliances</p>
<p>Receive, weigh and sort flock, yarn or fabric for dyeing or bleaching”.</p> <ul style="list-style-type: none"> <li>• These activities will appear as individual skills within the module.</li> </ul>	<p>Prepare flock, yarn or fabric for dyeing or bleaching.</p>
<p>Maintain pump</p> <ul style="list-style-type: none"> <li>• This gives the impression that only one type of pump will be maintained.</li> </ul>	<p>Maintain pumps</p> <ul style="list-style-type: none"> <li>• This allows for practical skills relating to various types of pumps.</li> </ul>

### Occupational contexts

Capture occupational contexts (see Step B5.1). Remember each occupational context will become the title of a work experience module.

Construction Rules
<ul style="list-style-type: none"> <li>• State the process, event or physical setting within a specific context in plural.</li> <li>• Do not state the context as an activity, e.g. “Maintain mechanical components”.</li> </ul>

Examples
<p><u>Fitter and Turner</u>: Routine mechanical component and machine maintenance processes</p> <p><u>Plastics Manufacturing Machine Setter</u>: Machinery and auxiliary equipment set-up processes</p> <p><u>Port Manager</u>: Port or harbour support processes</p> <p><u>Transport Coordinator</u>: Transport scheduling processes</p>

Not this	But rather this
<p>Machinery and auxiliary equipment set-up, start-up and shut-down processes</p> <ul style="list-style-type: none"> <li>• Provides too much detail. Roll up the details (work experiences) into a single statement.</li> </ul>	<p>Machinery and auxiliary equipment set-up processes</p>
<p>Management procedures for ensuring effective and efficient operations of the airport or harbour</p> <ul style="list-style-type: none"> <li>• Describes outcomes, i.e. ...for ensuring effective</li> </ul>	<p>Port or harbour support processes</p>

and efficient operation. • Procedures are too low a level	
Prepare transport schedules. • Describes the activity not the processes	Transport scheduling processes

### 9.2.1.9 Capture knowledge module specifications

#### Title

Capture the module title as defined during Step C3.1. Add and complete NQF Level xx identified during Step C3.6, and Credits xx and Learning contract time xx determined during Step C3.5.

Construction Rules
<ul style="list-style-type: none"> <li>• The name must be similar to typical chapters or sections in handbooks and should be further defined by a qualifier in terms of relevant products or services.</li> <li>• Capture the NQF Level.</li> <li>• Capture the number of credits.</li> <li>• Capture the Learning contract time” (specified in days or weeks)</li> </ul>

Examples
<p><u>Fitter and Turner</u>: Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)</p> <p><u>Plastics Manufacturing Machine Setter</u>: Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)</p> <p><u>Port Manager</u>: Airport and harbour operations management principles, NQF Level 6, 12 Credits (Learning contract time 15 days)</p> <p><u>Transport Coordinator</u>: Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)</p>

Not this	But rather this
<p>Engineering theories</p> <ul style="list-style-type: none"> <li>• Theories suggest that there are different approaches to mechanical engineering</li> <li>• Which type of engineering?</li> <li>• There is no indication of the level of knowledge required</li> </ul>	<p>Basic mechanical engineering theory</p> <ul style="list-style-type: none"> <li>• “Theory” represents the overall range of knowledge</li> <li>• “Mechanical” reflects the field</li> <li>• “Basic” represents the level of knowledge required</li> </ul>
<p>Quality in the manufacturing process</p> <ul style="list-style-type: none"> <li>• Which manufacturing process or Is there only one manufacturing process?</li> <li>• There is no context.</li> </ul>	<p>Quality in plastics manufacturing processes</p>
<p>Airport / harbour operations management</p> <ul style="list-style-type: none"> <li>• “/” presents an either or situation</li> </ul>	<p>Principles of airport and harbour operations management</p>
<p>Health, Safety, Quality and Legislation</p>	<p>Transportation related legislation, safety,</p>

<ul style="list-style-type: none"> <li>• There is no context</li> </ul>	health and quality
Very general and not referring to a product, service or context, e.g. "Preparation, installation and maintenance theory"	Reflect the product, service or context, e.g. "Preparation, installation and maintenance theory for solar water heating systems"

### Purpose of the knowledge module

Capture information obtained during Step C3.4 by completing the sentence "The main focus of the learning in this knowledge module is to build an understanding of..."

Construction Rules
<ul style="list-style-type: none"> <li>• Complete the sentence by summarising the intended outcome of the knowledge module as a statement always taking the context into consideration.</li> <li>• Start with a small letter and end with a full stop.</li> </ul>

Examples
<p><u>Fitter and Turner</u>: Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)</p> <p><i>The main focus of the learning in this knowledge module is to build an understanding of basic engineering concepts commonly associated with mechanical engineering trades.</i></p> <p><u>Plastics Manufacturing Machine Setter</u>: Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)</p> <p><i>The main focus of the learning in this knowledge module is to build an understanding of the properties, construction and functions of moulds, dies and forming devices, their handling and transportation requirements and their importance and their application in the plastics manufacturing process.</i></p> <p><u>Port Manager</u>: Airport and harbour operations management principles, NQF Level 6, 12 Credits (Learning contract time 15 days)</p> <p><i>The main focus of the learning in this knowledge module is to build an understanding of the operational management principles which underpin improvements in the performance of airports and harbours</i></p> <p><u>Transport Coordinator</u>: Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)</p> <p><i>The main focus of the learning in this knowledge module is to build an understanding of the various incidents and emergencies which may occur in the transportation industry.</i></p>

Not this	But rather this
<p><i>Airport and harbour operations management principles.</i></p> <p>... Airport or harbour management staff in order to improve the performance of Airport / Harbour.</p> <ul style="list-style-type: none"> <li>• This statement confuses the purpose of the module with the purpose of the qualification – The use of "/" creates confusion. Does it mean "and" or "or"?</li> <li>• The use of the singular and capitalisation</li> </ul>	<p>.... the operational management principles which underpin improvements in the performance of airports and harbours.</p>



creates the impression that this is a specific airport of harbour.	
<i>Transport risk management principles.</i> ... the various emergencies which may occur. <ul style="list-style-type: none"> <li>• Too general- needs to be contextualised.</li> </ul>	... the various incidents and emergencies which may occur in the transportation industry.

### Topics and percentage

Capture all topics (including the weight allocated and reflected as a percentage) identified during Step C3.2.

Construction Rules
<ul style="list-style-type: none"> <li>• Topics must be reflected as statements similar to headings in handbooks and can be further defined by a qualifier in terms of relevant products or services.</li> <li>• Add a weighting as a percentage that the assessment of this topic forms in relation to the assessment of the knowledge module as a whole.</li> </ul>

Examples
<p><b><u>Fitter and Turner:</u></b>  <b>Module:</b> Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)  <b>Topic:</b> Workplace health, safety and environmental protection (20%)</p> <p><b><u>Plastics Manufacturing Machine Setter:</u></b>  <b>Module:</b> Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)  <b>Topic:</b> Plastics Manufacturing Processes (100%)</p> <p><b><u>Port Manager:</u></b>  <b>Module:</b> Airport and harbour operations management principles, NQF Level 6, 12 Credits (Learning contract time 15 days)  <b>Topic:</b> Airport and harbour operations (20%)</p> <p><b><u>Transport Coordinator:</u></b>  <b>Module:</b> Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)  <b>Topic:</b> Incidents and accidents (50%)</p>

### Topics elements

Capture the topic elements identified during Step C3.2 for each related topic following the sentence: "The learning will enable learners to demonstrate an understanding of:"

Construction Rules
<ul style="list-style-type: none"> <li>• Topic elements must be reflected as statements and may not contain verbs.</li> <li>• Where required, range statements must be reflected by adding the word "including" or "such as" after the topic element followed by a list of items.</li> </ul>

## Examples

### **Fitter and Turner:**

**Module:** Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)

**Topic:** Workplace health, safety and environmental protection (20%)

#### **Topic elements:**

- General overview of relevant occupational health and safety legislation
- General workshop safety rules
- Types of personal protective equipment
- Hazard identification and risk assessment principles
- Concepts related to environmental protection and pollution

### **Plastics Manufacturing Machine Setter:**

**Module:** Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)

**Topic:** Plastics Manufacturing Processes (100%)

#### **Topic elements:**

- Safety procedures related to operating processing equipment, including up- and down-stream equipment, and auxiliary equipment such as robotics, pre- and post-treatment, packaging and printing equipment
- Start-up and shut-down procedures for machinery, including up- and down-stream equipment, and auxiliary equipment such as robotics, pre- and post-treatment, packaging and printing equipment
- Cycle times, including their importance and their impact on quality and productivity
- Principles related to using or adding regrind material to the production process

### **Port Manager:**

**Module:** Airport and harbour operations management principles, NQF Level 6, 12 Credits (Learning contract time 15 days)

**Topic:** Airport and harbour operations (20%)

#### **Topic elements:**

- Components of airport and harbour operations, including infrastructure, facilities and people
- Operation systems, including component interaction
- Basic concepts related to airside and landside maintenance, including operational readiness rates, preventative and corrective maintenance, and critical maintenance standards affecting airside and terminal operations

### **Transport Coordinator:**

**Module:** Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)

**Topic:** Incidents and accidents (50%)

#### **Topic elements:**

- Incidents and accidents, definitions and differences between them
- Preliminary actions for incidents and accidents
- Incident and accident procedures
- Preventative measures

Not this	But rather this
General overview of occupational health and safety legislation <ul style="list-style-type: none"> <li>• The scope of the topic is too broad</li> </ul>	General overview of <b>relevant</b> occupational health and safety legislation
Start-up and shut-down procedure for machinery <ul style="list-style-type: none"> <li>• Procedures vary from one workplace to another – what is meant here are the general steps</li> </ul>	Steps in starting up and shutting down plastics processing equipment
Describe airport and harbour business dynamics <ul style="list-style-type: none"> <li>• Do not use verbs</li> </ul>	Airport and harbour business dynamics
Differentiate between Incidents and Accidents <ul style="list-style-type: none"> <li>• Do not use verbs – state as content items</li> </ul>	Definitions and characteristics of incidents and accidents

### Internal assessment criteria

Capture the internal assessment criteria identified for each topic during Step C3.3.

Construction Rules
<ul style="list-style-type: none"> <li>• Start with a verb in its simplest form, i.e. without an “s” to indicate what the learner has to do to prove that he/she know or understand or can apply this knowledge.</li> <li>• Then add the actual elements to be assessed if appropriate.</li> </ul>

Examples
<p><b><u>Fitter and Turner:</u></b>  <b>Module:</b> Basic mechanical engineering theory, NQF Level 3, 32 Credits (Learning contract time 40 Days)  <b>Topic:</b> Workplace health, safety and environmental protection (20%)  <b>Assessment Criteria</b></p> <ul style="list-style-type: none"> <li>• Describe general safe work practices</li> <li>• Identify safety signs and describe associated risks and the safety measures</li> <li>• Discuss the inter-relationship between workplace safety and a productive work environment</li> </ul> <p><b><u>Plastics Manufacturing Machine Setter:</u></b>  <b>Module:</b> Plastics processing technology, NQF Level 2, 14 Credits (Learning contract time 17,5 Days)  <b>Topic:</b> Plastics manufacturing processes (100%)  <b>Assessment Criteria</b></p> <ul style="list-style-type: none"> <li>• Describe the safety procedures for operating machinery and down-stream and up-stream equipment</li> <li>• Describe the importance and impact of cycle times</li> <li>• Describe various stages of machine cycle times and how each stage can be adjusted</li> </ul>

**Port Manager:**

**Module:** Airport and harbour operations management principles, NQF Level 6, 12 Credits  
(Learning contract time 15 days)

**Topic:** Airport and harbour operations (20%)

**Assessment Criteria**

- Describe the various components of airport and harbour operations and explain how these components interact to form an operational system
- Describe the various risks and hazards associated with airport and harbour ground operations and discuss how they can be effectively managed
- Describe the challenges faced by airports and harbours and discuss the new operational, business and ownership models that have emerged in response to these challenges

**Transport Coordinator:**

**Module:** Transport risk management principles, NQF Level 4, 6 Credits (learning contract time 7,5 days)

**Topic:** Incidents and accidents (50%)

**Assessment Criteria:**

- Explain the difference between incidents and accidents within the transport industry.
- Explain what actions should be taken to avoid incidents and accidents accordance to specific procedure
- Discuss the incident and accident procedures relevant to each specific road transport operation or industry

Not this	But rather this
Explain procedure to safely operate machinery/down-stream equipment, up-stream equipment, <i>auxiliary equipment (robotics, pre-treatments, post-treatment, packaging and printing etc)</i> <ul style="list-style-type: none"><li>• This is part of the range statement.</li></ul>	Describe the safety procedures for operating machinery and down-stream and up-stream equipment.
<i>Get an overview of</i> the challenges Airport / Harbour are facing and analyse the new operational, business and ownership models that emerged in response to each challenge. <ul style="list-style-type: none"><li>• “Get an overview” and “analyse” are activities</li></ul>	Describe the challenges airports and harbours are facing and the new operational, business and ownership models that have emerged in response to each challenge

[Provider programme accreditation criteria](#)

Capture the provider programme accreditation requirements identified during Step C3.8 here.

**Note:** *Currently physical requirements are specified per module and the new capturing format will only be possible once the capturing system allows for this, i.e. capture the physical requirements per module until system allows for the new format.*

### Construction Rules

Keep a record for each individual module and summarise after all knowledge module specifications have been completed.

For Physical and Human Resource Requirements:

- First reflect the requirements that were identified for every knowledge module.
- Then reflect any specific requirements only pertaining to certain modules.
- Physical Requirements refers to:
  - Lesson plans.
  - Learning material.
  - Equipment.
- Human Resource Requirements refers to:
  - Number and ratio of lecturers.
  - Qualifications of lecturers or years of relevant experience.
  - Professional registration of lecturers, if any.
- Legal Requirements refers to:
  - Legal requirements in terms of compliance with specific legislation pertaining to the training itself, if any.

### Examples

#### Physical Requirements

Lesson plans and structured learning material that addresses all the topics in all the knowledge modules.

***In addition the following must be provided:***

- A computer per student in class for module xxxx

#### Human Resources Requirements

- Lecturer/learner ratio of 1:30 (Max).
- Lecturers for module xxxx must be registered with the SA Board of Personnel Practice.

#### Legal Requirements

Approved and accredited as an Aviation Training Organisation with the South African Civil Aviation Authority.

Not this	But rather this
Always referring to availability of learning material irrespective of NQF level.	Learning support material is required up to NQF Level 4. Beyond Level 4 a reference list of resources is sufficient.
Referring to the administrative capacity or physical attributes of the institution e.g. must have a library or information management system or be accredited with QCTO. These are institutional accreditation requirements.	Only refer to physical resources necessary to offer the specific curriculum or module.
Ignoring the possibility of distance learning.	

**Note:** Reference to legal requirements should only be made where applicable.

### Exemptions

List the exemptions identified during Step C3.7 or capture “None” if not applicable.

Construction Rules
<ul style="list-style-type: none"><li>• Capture the number and name of the qualification, unit standard or module</li></ul>

Examples
<ul style="list-style-type: none"><li>• NCV – Plumbing (Level 2)</li><li>• N2 – Electrical trade theory</li><li>• 262786: Apply plumbing principles as they pertain to the installation of a hot water system. NQF level 2, 8 Credits</li><li>• 714208-KM-12: Health and safety within a manufacturing context, NQF Level 2, 4 Credits</li></ul>

**Note 1:** No reference should be made to RPL.

**Note 2:** Any exemptions will also be reflected in the rules of combination in the assessment specifications document

#### 9.2.1.10 Capture practical skill module specifications

##### Title

Capture the exact occupational responsibility defined during Step B4.1 and reflected as the occupational responsibility in the occupational profile as the heading of the practical skill module. Add and complete (NQF Level xx) identified during Step C2.6 and the Credits xx and Learning Contract time xx identified during Step C2.5.

Construction Rules
<ul style="list-style-type: none"><li>• Identify a word or phrase that best describes the overall responsibility or function of a person towards the delivery of the product or service.</li><li>• Start with a verb in its simplest form, i.e. without an “s”.</li><li>• Then add a description of the “what” in plural, i.e. a noun/s to describe the product / service or building block.</li><li>• Capture the NQF Level</li><li>• Capture the credits</li><li>• Capture the “Learning contract time”</li></ul>

Examples
<p><u>Fitter and Turner</u>: Replace components and sub-assemblies and assemble machines, NQF Level 3, 6 Credits (Learning contract time 7,5 days)</p> <p><u>Plastics Manufacturing Machine Setter</u>: Set-up, programme and shut-down machinery and auxiliary equipment, NQF Level 4, 24 Credits (Learning contract time 30 days)</p> <p><u>Port Manager</u>: Manage port support operations NQF Level 6, 20 Credits (Learning contract time 25 days)</p> <p><u>Transport Coordinator</u>: Plan and prepare transportation schedules, NQF Level 4, 20 Credits (Learning contract time 25 days)</p>

Not this	But rather this
<p>Receive, weigh and sort flock, yarn or fabric for dyeing or bleaching”</p> <ul style="list-style-type: none"> <li>• This is a list of skills to be addressed in the module.</li> </ul>	<p>Prepare flock, yarn or fabric for dyeing or bleaching</p> <ul style="list-style-type: none"> <li>• “Prepare” better reflects the overarching responsibility.</li> </ul>
<p><u>Fitter and Turner</u>: Replace components and assemble mechanical sub-assemblies and machines</p>	<p><u>Fitter and Turner</u>: Replace components and sub-assemblies and assemble machines</p>
<p>Maintain pump Or <u>Plastics Manufacturing Machine Setter</u>: Set-up, programme and shut-down machine and auxiliary equipment</p> <ul style="list-style-type: none"> <li>• Using singular gives the impression that only one type of pump will be maintained or one type of machine will be set up.</li> </ul>	<p>Maintain pumps Or <u>Plastics Manufacturing Machine Setter</u>: Set-up, programme and shut-down machinery and auxiliary equipment</p> <ul style="list-style-type: none"> <li>• The module should allow for practical skills relating to various types of pumps or machines.</li> </ul>
<p><u>Port Manager</u>: Ensure compliance within the regulatory and legislative frameworks for airports and harbours</p> <ul style="list-style-type: none"> <li>• “Ensure” is a generalised term which does not describe the actual responsibility.</li> </ul>	<p><u>Port Manager</u>: Determine/assess/verify/monitor regulatory and legislative compliance of ... OR Identify and respond to regulatory and legislative non-compliances of...</p>

### Purpose of the practical skill module

Capture information obtained during Step C2.4 following the sentence “The focus of the learning in this module is on providing the learner an opportunity to”.

Construction Rules
<ul style="list-style-type: none"> <li>• Add a verb in its simplest form, i.e. without an “s” to summarise the intended outcome of the module. The statement must reflect what should be done to achieve what.</li> <li>• Start with a small letter and end with a full stop.</li> </ul>

Examples
<p><u>Fitter and Turner:</u>  <b>Module:</b> Replace components and sub-assemblies and assemble machines, NQF Level 3, 6 Credits (Learning contract time 7, 5 days)  <b>Purpose:</b> <i>The focus of the learning in this module is on providing the learner an opportunity to develop mechanical skills required to replace components and assemble a range of mechanical sub-assemblies and machines.</i></p> <p><u>Plastics Manufacturing Machine Setter:</u>  <b>Module:</b> Set-up, programme and shut-down machinery and auxiliary equipment, NQF Level 4, 24 Credits (Learning contract time 30 days)  <b>Purpose:</b> <i>The focus of the learning in this module is on providing the learner an opportunity to collect, analyse, organise and critically evaluate information when setting-up, programming, adjusting and shutting-down machinery and auxiliary equipment in order to meet product specifications.</i></p> <p><u>Port Manager:</u>  <b>Module:</b> Manage port support operations NQF Level 6, 20 Credits (Learning contract time 25 days)  <b>Purpose:</b> <i>The focus of the learning in this module is on providing the learner an opportunity to evaluate and respond to information in case studies reflecting various scenarios regarding the management of port operations. Learners will be developing skills related to the formulation of organisational strategies, developing organisational structures, and aligning systems to optimise the strategies.</i></p> <p><u>Transport Coordinator:</u>  <b>Module:</b> Plan and prepare transportation schedules, NQF Level 4, 20 Credits (Learning contract time 25 days)  <b>Purpose:</b> <i>The focus of the learning in this module is on providing the learner an opportunity to develop the skills to plan and prepare transport schedules within a simulated work environment</i></p>

Not this	But rather this
<p><i>The focus of the learning in this module is on providing the learner an opportunity to <u>manage</u> the airport or harbour operational functions. Learners will be developing skills related to facilitating the formulation of organisational strategy for port operations, developing organisational structure for port operations, and identifying and aligning systems to optimise strategy for an airport or a harbour.</i></p> <ul style="list-style-type: none"> <li>• “Manage” is not possible in a simulated environment and must be further explained.</li> <li>• “Facilitate” requires real interaction which in this context is not possible.</li> </ul>	<p><i>The focus of the learning in this module is on providing the learner an opportunity to <u>evaluate and respond to information in case studies</u> reflecting various scenarios regarding the management of port operations. Learners will be developing skills related to the formulation of organisational strategies, developing organisational structures, and aligning systems to optimise the strategies.</i></p>



<p><i>The focus of the learning in this module is on providing the learner an opportunity to practice and display the planning and preparing of transport schedules within a simulated work environment. <u>The learners will be practicing skills related to the Transport Environment in any given scenario</u></i></p> <ul style="list-style-type: none"> <li>• The last section is not relevant.</li> </ul>	<p><i>The focus of the learning in this module is on providing the learner an opportunity to develop the skills to plan and prepare transport schedules within a simulated work environment</i></p>
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### Practical skills

Following the purpose statement, capture the practical skills identified during Step B4.2 and finalised during Step C2.1 following the sentence “The learner will be required to:”

Construction Rules
<ul style="list-style-type: none"> <li>• Start with a verb in its simplest form, i.e. without an “s”.</li> <li>• Then add a description of the “what” in plural.</li> </ul>

Examples
<p><u>Fitter and Turner:</u>  <b>Module:</b> Replace components and sub-assemblies and assemble machines, NQF Level 3, 6 Credits (Learning contract time 7,5 days)  <b>Practical skills:</b> The learner will be required to:</p> <ul style="list-style-type: none"> <li>• Replace gearbox components and assemble gearboxes</li> <li>• Replace pump components and assemble pumps</li> <li>• Replace brake components and assemble brakes</li> <li>• Replace drive components and assemble drives</li> <li>• Replace bearings</li> </ul> <p><u>Plastics Manufacturing Machine Setter</u>  <b>Module:</b> Set-up, programme and shut-down machinery and auxiliary equipment, NQF Level 4, 24 Credits (Learning contract time 30 days)  <b>Practical skills:</b> The learner will be required to:</p> <ul style="list-style-type: none"> <li>• Set-up and programme machinery and auxiliary equipment</li> <li>• Shut-down machinery and auxiliary equipment</li> <li>• Monitor manufacturing processes</li> <li>• Adjust machinery and auxiliary equipment</li> </ul> <p><u>Port Manager:</u>  <b>Module:</b> Maintain port support operations, NQF Level 6, 20 Credits (Learning contract time 25 days)  <b>Practical skills:</b> The learner will be required to:</p> <ul style="list-style-type: none"> <li>• Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed</li> <li>• Develop organisational strategies and structures to address the issues identified for each of the port operations</li> <li>• Develop proposals, action plans and budgets to align the operational systems to optimise each strategy (HR, IT, security, etc)</li> </ul>

<p><u>Transport Coordinator:</u>  <b>Module:</b> Plan and prepare transportation schedules, NQF Level 4, 20 Credits (Learning contract time 25 days)  <b>Practical skills:</b> The learner will be required to:</p> <ul style="list-style-type: none"> <li>• Identify resource requirements and develop the transportation schedules</li> <li>• Interpret customer needs and specifications</li> <li>• Identify and prepare required transportation documentation for the trips</li> </ul>
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Not this	But rather this
Referring to generic skills – “analytical skills”, “communication skills”, “interpersonal skills”.	Make sure that the actual practical skill that must be performed is described.
Stating the “what” in singular form as doing a thing once is sufficient to develop the skill.	
Using adverbs, e.g. “correctly” or adverbial phrases such as “according to procedures”.	
<p><u>Transport Coordinator:</u>  <i>Conduct preparatory activities</i></p> <ul style="list-style-type: none"> <li>• “Conduct preparatory activities” does not provide sufficient guidance to providers – it is too broad.</li> </ul> <p><i>Prepare operational documents</i></p> <ul style="list-style-type: none"> <li>• “Prepare” is an activity not a skill and operational documents should be clarified.</li> </ul>	<p><u>Transport Coordinator:</u>  Identify resource requirements and develop the transportation schedules</p> <ul style="list-style-type: none"> <li>• Describe the actual skill.</li> </ul> <p>Identify and prepare required transportation documentation for the trips</p>

Scope of the practical skill module

For each practical skill, capture the condition, following the word “Given”

Then capture the practical skill activities identified during Step C2.1 following the sentence “the learner must be able to:”

Construction Rules
<ul style="list-style-type: none"> <li>• Start with a small letter and add the conditions, inputs and resources that must be provided to the learner to carry out the activities followed by a comma</li> </ul> <p>Following the sentence a learner must be able to:</p> <ul style="list-style-type: none"> <li>• List all practical activities.</li> <li>• Each practical activity listed must start with a verb in its simplest form, i.e. without an “s”.</li> </ul>

Examples
<p><u>Fitter and Turner</u>  <b>Practical skill:</b> Replace gearbox components and assemble a gearbox  <b>Scope:</b> Given a gearbox, tools, personal protective equipment, specifications and, material, the learner must be able to:</p> <ul style="list-style-type: none"> <li>• Identify potential hazards and risks related to the job and list the appropriate responses</li> <li>• Select tools, materials, equipment and lubricants</li> <li>• Replace worn, damaged, defective components or parts</li> <li>• Assemble, set and record gearbox components or parts’ numbers and specifications</li> </ul>

(including floats)

Plastics Manufacturing Machine Setter

**Practical skill:** Adjust machine and auxiliary equipment

**Scope:** Given machinery, tooling and materials and a production schedule, the learner must be able to:

- Interpret the production order and source the correct product specifications and machine settings.
- Evaluate the process settings against product specifications
- Change settings to meet product specifications

Port Manager

**Practical skill:** Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed

**Scope:** Given task instructions for various scenarios, including organisational planning reports, activity documents, relevant templates, forms, and standard operating procedures, the learner must be able to:

- Evaluate organisational planning reports
- Identify goals and targets aligned to strategic objectives
- Evaluate organisational performance against operational deliverables and identify performance-related issues
- Formulate revised organisational strategies and presentations summarising the proposed changes

Transport Coordinator

**Practical skill:** Identify and prepare transportation documentation for the trips

**Scope:** Given case studies, including sample work instructions, relevant templates, forms, typical company transport documentation formats, operational policies and standard operating procedures, the learner must be able to:

- Identify documentary requirements for each trip
- Prepare, and complete operational documents for each trip
- Check to verify that all the details in the relevant documents are correct and conform to operational policies and standards

**Note 1:** *The scope statement will be used as criteria for provider programme accreditation in terms of physical requirements. It must reflect what the provider must make available in order to enable the learner to complete all the practical skill activities.*

Not this	But rather this
<p><i>Given machinery, equipment tooling and materials and production orders, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• The statement does not capture all requirements for provider programme accreditation.</li></ul>	<p><i>Given machinery, equipment tooling and materials, production orders, product specifications and reporting documentation, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• Include all requirements as outlined in practical skill activities.</li></ul>
<p><i>Given work instructions, checklists, case studies, activity documents, relevant templates, forms, and standard operating procedures, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• The term “work instructions” should be</li></ul>	<p><i>Given task instructions (including organizational planning reports), activity documents, relevant templates, forms, and standard operating procedures, the learner must be able to:</i></p> <ul style="list-style-type: none"><li>• Include aspects reflected in the workplace</li></ul>

<p>avoided as this is not workplace activities.</p>	<p>activities.</p>
<p>Participate in organizations planning and compile a report</p> <ul style="list-style-type: none"> <li>• This reflects work activities and is difficult for a skills development provider to implement. Only in exceptional purposes should observation of workplace activities be used as in the development of practical skills. Such observation is better positioned as a work experience activity.</li> </ul> <p>Set goals and targets aligned with strategic objectives</p> <p>Set up and control relevant management systems</p> <ul style="list-style-type: none"> <li>• The above two activities is more workplace related</li> </ul> <p>Assess performance against operational deliverables</p> <p>Evaluate organisational performance</p> <ul style="list-style-type: none"> <li>• There seems to be very little difference between above two activities</li> </ul>	<p>Evaluate organisational planning reports</p> <p>Identify goals and targets aligned to strategic objectives</p> <p>Identify relevant management systems</p> <ul style="list-style-type: none"> <li>• Reflect activities that can be performed in a simulated environment.</li> </ul> <p>Evaluate organisational performance against operational deliverables and identify performance-related issues</p> <ul style="list-style-type: none"> <li>• Combine the two similar statements</li> </ul>
<p><i>Given <u>work instructions</u>, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:</i></p> <ul style="list-style-type: none"> <li>• Avoid starting with the term “work instructions”. The list is confusing compiled.</li> </ul>	<p><i>Given <u>case studies</u>, including sample work instructions, relevant templates, forms, typical company schedule formats, safety and quality principles and standard operating procedures, the learner must be able to:</i></p> <ul style="list-style-type: none"> <li>• Start with case studies and then list the documents and other resources which make up the case study that must be provided by providers to enable the activities.</li> </ul>
<p>Read, prepare, prioritize and complete operational document</p> <ul style="list-style-type: none"> <li>• Do not state in singular and do not list activities.</li> </ul>	<p>Identify documentary requirements for each trip</p> <p>Prepare, and complete operational documents for each trip</p> <p>Check to verify that all the details in the relevant documents are correct and conform to operational policies and standards</p> <ul style="list-style-type: none"> <li>• List activities separately using a plural to reflect the practice component of the activity to be performed in the simulated environment that the learner needs to perform to gain confidence and skill.</li> </ul>

## Applied Knowledge

Capture the applied knowledge identified for each practical skill during Step C2.2.

<b>Construction Rules</b>
<ul style="list-style-type: none"><li>• Compile a list of the specific knowledge required to perform the practical activities, i.e. technical information, typical health and safety and quality standards, typical procedures, tools, and techniques related to performing the activities etc.</li><li>• This should not be a repetition of items from the knowledge modules.</li></ul>

<b>Examples</b>
<p><b>Practical skill:</b> Replace gearbox components and assemble gearboxes <u>Fitter and Turner</u></p> <p><b>Applied knowledge:</b></p> <ul style="list-style-type: none"><li>• Procedures for replacing and assembling gearboxes</li><li>• Original equipment manufacturers' gearbox specifications</li><li>• Gearbox lubrication procedures</li><li>• Techniques for marking components for alignment and positioning</li></ul> <p><u>Plastics Manufacturing Machine Setter</u></p> <p><b>Practical skill:</b> Adjust machinery and auxiliary equipment</p> <p><b>Applied knowledge:</b></p> <ul style="list-style-type: none"><li>• Setting procedures and techniques</li><li>• Impact of setting changes on the quality of the product</li><li>• Safety procedures during the setting process</li></ul> <p><u>Port Manager</u></p> <p><b>Practical skill:</b> Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed</p> <p><b>Applied knowledge:</b></p> <ul style="list-style-type: none"><li>• Organisational planning techniques</li><li>• Stakeholder analysis techniques and tools</li><li>• Risk and performance management tools and techniques</li><li>• Contingency planning methods</li><li>• Organisational structures and planning processes</li><li>• Performance monitoring and evaluation practices</li></ul> <p><u>Transport Coordinator</u></p> <p><b>Practical skill:</b> Identify and prepare required transportation documentation for the trips</p> <p><b>Applied knowledge:</b></p> <ul style="list-style-type: none"><li>• Typical company policies related to the National Road Traffic Act (NRTA)</li><li>• .Driver driving requirements</li></ul> <p>Vehicle road worthiness standards SANS10047</p>

Not this	But rather this
Company operational policies and procedures <ul style="list-style-type: none"> <li>• This is organisation-specific (contextual) knowledge and is linked to the work experience modules.</li> </ul>	Typical operational policies and procedures Guidance to the provider to sources typical documents
Models of stakeholder analysis <ul style="list-style-type: none"> <li>• This is a typical knowledge module item.</li> </ul>	Stakeholder analysis techniques and tools <ul style="list-style-type: none"> <li>• Here the focus is on how the models are implemented</li> </ul>
Reference to concepts, principles, theories	Focus on techniques and legal, safety, health and environmental requirements.

### Internal assessment criteria

Capture the internal assessment criteria identified for each practical skill during Step C2.3.

Construction Rules
<ul style="list-style-type: none"> <li>• Start with the piece of evidence or performance (process) being evaluated: e.g. “Gearbox components”, “Machine settings”, “The strategic plans or “The operational documents” “The emotions or disruptions”.</li> <li>• Then add the standard of performance to be achieved or criteria for the evaluation, e.g. “according to original equipment manufacturers’ specifications”.</li> <li>• In some instances add the criterion to the evidence before the evidence, e.g. “Correct product specifications and machine settings”.</li> <li>• In some instances add a qualifier before the evidence, e.g. “Revised settings”, or “The completed operational documents”.</li> </ul>

Examples
<p><u>Fitter and Turner</u></p> <p><b>Practical skill:</b> Replace gearbox components and assemble gearboxes</p> <p><b>Internal assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Procedures to replace gearbox components and assemble gearboxes are described and applied</li> <li>• Gearbox components are replaced according to original equipment manufacturers’ specifications</li> <li>• Gearboxes are assembled according to original equipment manufacturers’ specifications</li> <li>• Risks and hazards are identified and responded to in a responsible manner</li> </ul> <p><u>Plastics Manufacturing Machine Setter</u></p> <p><b>Practical skill:</b> Adjust machinery and auxiliary equipment</p> <p><b>Internal assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Correct product specifications and machine settings are sourced</li> <li>• Revised settings result in products that meet specifications.</li> <li>• Relevant documentation is completed correctly</li> </ul>

Port Manager

**Practical skill:** Analyse the information related to the port operations in each scenario and identify the key issues that have to be addressed

**Internal assessment criteria:**

- The evaluation of organisational planning reports is systematic and thorough, and identifies valid and pertinent performance-related issues.
- The revised strategic plans specify realistic goals and targets aligned with the strategic objectives and the performance issues that have been identified
- Reports on management systems demonstrate propose essential and practical changes
- The proposed revisions to operational strategies and the related presentations are clear, comprehensive and compelling

Transport Coordinator:

**Practical skill:** Identify and prepare required transportation documentation for the trips

**Internal assessment criteria:**

- The completed transportation documents meet legislative requirements.
- The correct documents have been prepared for each trip.
- The process of checking the information on the forms is systematic and thorough

Not this	But rather this
<p>Identify hazards and assess risks when assembling gearboxes</p> <ul style="list-style-type: none"> <li>• This is an assessment task and not an assessment criterion</li> </ul>	<p>Risks and hazards are identified and responded to in a responsible manner.</p> <ul style="list-style-type: none"> <li>• This reflects the items the learner must have identified and dealt with</li> </ul>
<p>Reports meet industry standards</p> <ul style="list-style-type: none"> <li>• This is too vague, unless there really is a published standard. If there is then the name of the standard needs to be referenced.</li> </ul> <p>Also</p> <p>Reports meet company standards</p> <ul style="list-style-type: none"> <li>• Companies have a variety of standards so which company's standards are the standard?</li> </ul>	<p>Reports meet typical company standards</p>
<p><u>Port Manager</u></p> <p>Reports on strategic planning meetings meet industry standards</p> <p>The strategic plans specify realistic goals and targets aligned with the strategic objectives</p> <p>Reports on management systems demonstrate improved efficiencies between different components of the organisation</p>	<p><u>Port Manager</u></p> <p>The evaluation of organisational planning reports is systematic and thorough, and identifies valid and pertinent performance-related issues</p> <p>The revised strategic plans specify realistic goals and targets aligned with the strategic objectives and the performance issues that have been identified</p> <p>Reports on management systems demonstrate proposed essential and practical changes</p>

## Provider programme accreditation criteria

Capture the provider programme accreditation requirements identified during Step C2.7 here.

Construction Rules
<ul style="list-style-type: none"><li>Physical requirements should be referenced in the scope statement. The following statement must be completed: “The provider must have all the” xxxxxx The sentence must end with: specified in the scope statement.”</li><li>Human Resource Requirements refers to:<ul style="list-style-type: none"><li>➤ Number and ratio of trainers.</li><li>➤ Qualifications of trainers or years of relevant experience.</li><li>➤ Professional registration of trainers, if any.</li></ul></li><li>Legal Requirements refers to:<ul style="list-style-type: none"><li>➤ Legal requirements in terms of compliance with specific legislation pertaining to the training itself, if any.</li></ul></li></ul>

Examples
<p><b>Physical Requirements</b> All the machinery, consumables, equipment and documents specified in the scope statement.</p> <p><b>Human Resources Requirements</b></p> <ul style="list-style-type: none"><li>➤ Trainer/learner ratio of 1:15 (Max)</li><li>➤ Trainers must be qualified artisans</li><li>➤ Trainers must be registered with NAMB as practicing artisans</li></ul> <p><b>Legal Requirements</b> E.g. if the training is related to aviation: Approved and accredited as an Aviation Training Organisation with the South African Civil Aviation Authority</p>

**Note:** Reference to legal requirements should only be made where applicable.

## Exemptions

Capture the exemptions identified during Step C2.8 here or capture “None” if not applicable.

Construction Rules
<ul style="list-style-type: none"><li>Capture the number and name of the qualification, unit standard or module.</li></ul>

Examples
<ul style="list-style-type: none"><li>NCV – Plumbing (Level 2)</li><li>N2 – Electrical trade theory</li><li>26278: Apply plumbing principles as they pertain to the installation of a hot water system, NQF Level 2, 8 Credits</li><li>714208-KM-12: Health and safety within a manufacturing context, NQF Level 2, 4 Credits</li></ul>



**Note 1:** No reference should be made to RPL.

**Note 2:** Any exemptions must also be listed in the rules of combination in the assessment specifications document.

### 9.2.1.11 Capture work experience module specifications

#### Title

Capture the exact occupational context defined during Step B5.1 and reflected as the occupational context in the occupational profile as the heading of the work experience module. Add and complete (NQF Level xx) identified during Step C1.6 and the Credits xx and Learning Contract time xx identified during Step C1.5.

Construction Rules
<ul style="list-style-type: none"> <li>• State the process, event or physical setting within a specific context in plural.</li> <li>• Do not state the context as an activity, i.e. do not start with a verb.</li> <li>• Capture the NQF Level</li> <li>• Capture the Credit value</li> <li>• Capture the Learning contract time</li> </ul>

Examples
<p><u>Fitter and Turner</u>: Routine mechanical component and machine maintenance processes, NQF Level 3, 40 Credits (Learning contract time 50 days)</p> <p><u>Plastics Manufacturing Machine Setter</u>: Machinery and auxiliary equipment set-up processes, NQF Level 4, 50 Credits (Learning contract time 62,5 days)</p> <p><u>Port Manager</u>: Airport or Harbour support processes, NQF Level 5, 4 Credits (Learning contract time 5 days)</p> <p><u>Transport Coordinator</u>: Transport scheduling processes, NQF Level 4, 10 Credits (Learning contract time 12,5 days)</p>

Not this	But rather this
<p>Machinery and auxiliary equipment set-up, start-up and shut-down processes</p> <ul style="list-style-type: none"> <li>• Provides too much detail. Roll up the details (work experiences) into a single statement.</li> </ul>	<p>Machinery and auxiliary equipment set-up processes.</p>
<p>Management procedures for ensuring effective and efficient operations of the airport or harbour</p> <ul style="list-style-type: none"> <li>• “for ensuring effective and efficient operation” describe outcomes</li> <li>• Procedures are at a lower level than occupational context</li> <li>• Do not star with a verb</li> </ul>	<p>Port or harbour management processes</p> <ul style="list-style-type: none"> <li>• Do not reflect outcomes.</li> <li>• Do not start with a verb.</li> </ul>
<p>Prepare transport schedules.</p> <ul style="list-style-type: none"> <li>• Describes the activity not the processes</li> </ul>	<p>Transport scheduling processes</p>

## Purpose of the work experience module

Capture information obtained during Step C1.4 (Process 6.2.1.4) by completing the sentence ““The focus of the work experience is on providing the learner an opportunity to.....”

Construction Rules
<ul style="list-style-type: none"> <li>• Start with a verb in small letters and in its simplest form, i.e. without an “s” to summarise the intended outcome of the module.</li> <li>• Then specify the reason by adding what must be done or achieved.</li> <li>• Then if required include contexts at high level.</li> </ul>

Examples
<p><u>Fitter and Turner:</u></p> <p><b>Module:</b> Routine mechanical component and machine maintenance processes, NQF Level 3, 40 Credits (Learning contract time 50 days)</p> <p><b>Purpose:</b> <i>The focus of the work experience is on providing the learner an opportunity to gain exposure to and experience of the typical maintenance requirements and maintenance processes for various types of mechanical equipment.</i></p> <p><u>Plastics Manufacturing Machine Setter:</u></p> <p><b>Module:</b> Machinery and auxiliary equipment set-up processes, NQF Level 4, 50 Credits (Learning contract time 62,5 days)</p> <p><b>Purpose:</b> <i>The focus of the work experience is on providing the learner an opportunity to set-up a variety of machinery and auxiliary equipment for a range of products.</i></p> <p><u>Port Manager:</u></p> <p><b>Module:</b> Airport or Harbour support processes, NQF Level 5, 4 Credits (Learning contract time 5 days)</p> <p><b>Purpose:</b> <i>The focus of the work experience is on providing the learner an opportunity to work in various operational support environments observing, assisting, and contributing work under supervision of senior staff with at least 2 years’ experience.</i></p> <p><u>Transport Coordinator:</u></p> <p><b>Module:</b> Transport scheduling processes, NQF Level 4, 10 Credits (Learning contract time 12,5 days)</p> <p><b>Purpose:</b> <i>The focus of the work experience is on providing the learner an opportunity to gain exposure to working as part of a team in developing transport schedules within a real life transport environment.</i></p>

Not this	But rather this
<p>... gain exposure to working as part of a team in developing transport schedules within a real life transport environment. The learner will be required to complete each work experience at least four (4) times</p> <ul style="list-style-type: none"> <li>• Include the repetitions or duration in the work experience and not the purpose statement. The latter is not included in the Statement of Work Experience and thus the person signing off will not be able to sign off this</li> </ul>	<p>... gain exposure to working as part of a team in developing transport schedules within a real life transport environment.</p>

requirement.	
... set-up machinery and auxiliary equipment <ul style="list-style-type: none"> <li>• Do not simply state the purpose as an activity.</li> <li>• Provide the workplace with guidance about the range and scope of the activity.</li> </ul>	... set-up a variety of machinery and auxiliary equipment for a range of products.
Stating the obvious, e.g. "in a real life environment" Or "under supervision of knowledgeable staff"	

## Work experiences

Capture the work experiences identified during Step B5.2 and finalised during Step C1.1.

Construction Rules
The work experiences must follow the sentence: "The learner will be required to:" <ul style="list-style-type: none"> <li>• Start with a verb in its simplest form, i.e. without an "s".</li> <li>• Then add the "what" (description of the relevant experience) in plural.</li> <li>• If applicable, add the duration in hours, weeks or months.</li> <li>• If applicable, add the frequency or number of repeats.</li> </ul>

Examples
<u>Fitter and Turner:</u> <b>Module:</b> Routine mechanical component and machine maintenance processes <b>Work experiences:</b> <ul style="list-style-type: none"> <li>• Assist an experienced artisan to perform routine maintenance on mechanical sub-assemblies and machines for a period of two weeks</li> <li>• Perform routine maintenance on a range of mechanical sub-assemblies and machines, under supervision, for a period of at least 4 weeks</li> <li>• Perform routine maintenance of mechanical sub-assemblies and machines autonomously for a period of at least 8 weeks</li> </ul>
<u>Plastics Manufacturing Machine Setter</u> <b>Module:</b> Machinery and auxiliary equipment set-up processes <b>Work experiences:</b> Observe and assist with start-up and shut-down of machinery and auxiliary equipment over a period of 40 hours Start-up and shut-down machinery and auxiliary equipment, under supervision, over a period of 120 hours Set-up, start-up and shut-down machinery and auxiliary equipment over a period of 340 hours
<u>Port Manager:</u> <b>Module:</b> Port or harbour support processes <b>Work experiences:</b> <ul style="list-style-type: none"> <li>• Review customer service policies and procedures</li> <li>• Revise airport or harbour infrastructure maintenance services standards, policies and procedures</li> </ul>

Transport Coordinator:

**Module:** Transport scheduling processes

**Work experiences:**

- Observe and assist an experienced transport scheduler to develop at least four transport schedules
- Prepare and develop at least four transport schedules under supervision

Autonomously prepare and develop at least four transport schedules

Not this	But rather this
<p>Start-up and shut-down machinery and auxiliary equipment under supervision, over a period of 120 hours according to company standards</p> <ul style="list-style-type: none"> <li>• Reflecting standards, e.g. "... according to company standards" in a workplace context learners would, of necessity, have to comply with company standards.</li> </ul>	<p>Start-up and shut-down machinery and auxiliary equipment, under supervision, over a period of 120 hours</p>
<p>Prepare and develop transport schedules</p> <ul style="list-style-type: none"> <li>• This describes a work activity and does not provide sufficient guidance to the workplace. There should be some guidance in terms of range duration or frequency</li> </ul>	<p>Prepare and develop a variety of different kinds of transport schedules under supervision for a period of at least two weeks OR</p> <p>Prepare and develop at least four transport schedules of various kinds under supervision</p>
<p>Autonomously prepare and develop a transport schedule, signed off by an experience transport scheduler</p> <ul style="list-style-type: none"> <li>• One transport schedule is insufficient to develop proficiency. State the "what" in the plural.</li> </ul>	<p>Autonomously prepare and develop transport schedules...</p>
<p>Reflecting workplace approval requirements, e.g. under guidance of an experienced...</p>	<p>Just reflect whether under supervision or autonomously.</p>

### Scope of the work experience module

Capture the work activities identified during Step C1.1.

Construction Rules
<p>The work activities must be able to follow the sentence: "The person will be expected to engage in the following work activities:"</p> <p><b>List all the related work activities and for each:</b></p> <ul style="list-style-type: none"> <li>• Indicate what the person will be expected to do, starting with a verb (present tense in its simplest form, i.e. verb without an "s").</li> <li>• Then state the frequency (number of times), time duration or range of the activity, if required</li> <li>• Add a description of the "what" in plural.</li> </ul>

## Examples

### Fitter and Turner:

**Module:** Routine mechanical component and machine maintenance processes

**Work experience:** Perform routine maintenance on a range of mechanical sub-assemblies and machines under supervision on at least 5 of the following: gearboxes, pumps, brakes, clutches, drives, valves, bearings, lubrication systems, hydraulic systems, pneumatic systems

**Work activities:**

- Inspect and prepare the work sites
- Implement safety precautions including hazard identification and risk assessment, lock and tag out, selecting and using appropriate personal protective equipment
- Perform a range of routine maintenance tasks of varying complexity on at least 5 of the following: gearboxes, pumps, brakes, clutches, drives, valves, bearings, lubrication systems, hydraulic systems, pneumatic systems
- Interact with production personnel and report on routine maintenance

### Plastics Manufacturing Machine Setter

**Module:** Machine and auxiliary equipment set-up processes

**Work experience:** Set-up, start-up and shut-down machinery and auxiliary equipment over a period of 340 hours

**Work activities:**

- Plan and prepare for machinery and auxiliary equipment set-up processes
- Start-up machinery and auxiliary equipment
- Shut-down machinery and auxiliary equipment
- Set up and programme a variety of machines and auxiliary equipment
- Plan, prepare for and perform materials and colours change-over
- Monitor manufacturing processes for a variety of plastic products and adjust settings as required

### Port Manager:

**Module:** Airport or harbour support processes

**Work experience:** Port infrastructure maintenance services standards, policies and procedures

**Work activities:**

- Participate in the review and revision of standard operating procedures for maintenance of infrastructure
- Compile or revise predictive and preventative maintenance plans
- Compile or revise maintenance schedules for equipment, infrastructure and facilities
- Compile a report on issues, revisions and contributions made to the compilation or revision of the documents

### Transport Coordinator:

**Module:** Transport scheduling processes

**Work experience:** Prepare and develop transport schedules

**Work activities:**

- Obtain relevant documentation and tools at the point of use
- Perform an on-site risk analysis for each trip
- Compile at least four transport schedules

Not this	But rather this
Inspect and prepare the work site <ul style="list-style-type: none"> <li>• Stating the “what” in singular form as doing a thing once is insufficient to develop the skill.</li> </ul>	Inspect and prepare the work sites
Start-up machinery and auxiliary equipment according to company standards <ul style="list-style-type: none"> <li>• Do not add performance standards, e.g. “according to company standards”. Workplaces expect work to be done according to their standards.</li> </ul>	Start-up machinery and auxiliary equipment
Compile predictive and preventative maintenance plans <ul style="list-style-type: none"> <li>• This is an unlikely task to be allocated to a learner. Nor are all learners likely to be exposed to the compiling of such a document. This would occur only if there happened to be something new at the very time the learner was there.</li> </ul>	Participate in the compiling or revision of predictive and preventative maintenance plans

### Supporting Evidence

Capture the supporting evidence identified during Step C1.2.

Construction Rules
<ul style="list-style-type: none"> <li>• List the documents containing the relevant evidence.</li> <li>• Provide an appropriate quality indicator to reflect the standard of performance, where required</li> </ul>

Examples
<p><u>Fitter and Turner:</u>  <b>Module:</b> Routine mechanical component and machine maintenance processes  <b>Work experience:</b> Perform routine maintenance of a range of mechanical sub-assemblies and machines under supervision  <b>Supporting evidence:</b></p> <ul style="list-style-type: none"> <li>• Signed-off job cards</li> <li>• Non-conformance reports</li> <li>• Workplace logbook or portfolio</li> <li>• Equipment downtime records</li> </ul> <p><u>Plastics Manufacturing Machine Setter</u>  <b>Module:</b> Machinery and auxiliary equipment set-up processes  <b>Work experience:</b> Set-up, start-up and shut-down machinery and auxiliary equipment over a period of 340 hours  <b>Supporting evidence:</b></p> <ul style="list-style-type: none"> <li>• Shift reports</li> <li>• Non-conformance reports</li> </ul>

Port Manager:

**Module:** Maintenance processes for airport and harbour operations

**Work experience:** Airport or harbour support processes

**Supporting evidence:**

- Signed off predictive and preventive maintenance plans
- Signed off equipment, infrastructure and facility maintenance schedules

Transport Coordinator:

**Module:** Transport scheduling processes

**Work experience:** Prepare and develop transport schedules

**Supporting evidence:**

- Approved transport plans signed by the learner and the qualified person on record
- Completed risk assessment checklists signed by the learner and the qualified person on record

Not this	But rather this
Shift report <ul style="list-style-type: none"> <li>• There should be a history of shift reports for the duration of the work experience or for the number of repetitions.</li> </ul>	Shift reports
Standard Operating Procedure <ul style="list-style-type: none"> <li>• This is a company document it does not contain any evidence of work done by the learner.</li> </ul>	Completed checklists OR Maintenance reports

### Contextualised workplace knowledge

Capture the contextualised workplace knowledge identified for each topic during Step C1.3

Construction Rules
<ul style="list-style-type: none"> <li>• List the specific knowledge and information required to meaningfully engage in the occupational context.</li> </ul>

Examples
<p><u>Fitter and Turner:</u></p> <p><b>Module:</b> Routine mechanical component and machine maintenance processes</p> <p><b>Contextualised workplace knowledge:</b></p> <ul style="list-style-type: none"> <li>• Workplace Hazard Inspection and Risk Assessment procedures</li> <li>• Material request and storage procedures</li> <li>• Equipment handling and storage procedures</li> <li>• Standard operating procedures</li> <li>• Original Equipment Manufacturers' manuals and specifications</li> </ul>

Plastics Manufacturing Machine Setter

**Module:** Machinery and auxiliary equipment set-up processes

**Contextualised workplace knowledge:**

- Organisational policies, procedures and work instructions
- Manufacturer’s machine manuals
- Material safety data sheets
- Product specifications and related quality data

Port Manager:

**Module:** Airport or harbour support processes

**Contextualised workplace knowledge:**

- Company specific policies and related standard operating procedures
- Manufacturers’ maintenance documents and specifications
- Facility maintenance standards, plans and schedules

Transport Coordinator:

**Module:** Transport scheduling processes

**Contextualised workplace knowledge:**

- Company specific policies and procedures
- Company specific quality management system requirements
- Relevant statutory requirements: Not limited to Occupational Health and Safety Act, Road Transport Acts, Traffic regulations
- Relevant ISO standards
- Relevant SANS standards
- Manufacturers’ specifications

Not this	But rather this
ISO standards <ul style="list-style-type: none"><li>• This is too broad</li></ul>	Relevant ISO standards

Workplace approval criteria

Capture the workplace approval criteria requirements identified during Step C1.7

Construction Rules
<ul style="list-style-type: none"><li>• List the critical categories of physical requirements in terms of:<ul style="list-style-type: none"><li>• Tools</li><li>• Equipment</li><li>• Systems</li></ul></li><li>• List the key processes</li><li>• List the human resources requirements in terms of:<ul style="list-style-type: none"><li>• Qualifications, registration or experience of supervisors</li><li>• Supervisor subordinate ratios</li><li>• Availability of coaches and mentors</li></ul></li><li>• List the legal requirements in terms of compliance with:<ul style="list-style-type: none"><li>• Legislation limited to legislation related to licensing.</li></ul></li></ul>



Examples
<p><u>Physical Requirements</u></p> <p><i>Tools, equipment, systems, e.g.:</i></p> <ul style="list-style-type: none"> <li>➤ Access to an operational airport with passenger amenities, check-in facilities, baggage handling, passenger processing, customs/immigrations, boarding, disembarking, security and safety.</li> <li>➤ Access to a computer, company systems, documents, data and relevant meetings.</li> </ul> <p><i>Key processes, e.g.:</i></p> <ul style="list-style-type: none"> <li>➤ Raw materials receiving and stockpiling (Rail and road transport of material).</li> <li>➤ Company strategy development and review meetings and processes.</li> </ul> <p><u>Human Resources Requirements</u></p> <ul style="list-style-type: none"> <li>➤ Maximum supervisor/worker ratio of 1:25.</li> <li>➤ A qualified metallurgist on site who is involved in the production process.</li> </ul> <p><u>Legal Requirements</u></p> <ul style="list-style-type: none"> <li>➤ Compliance with all occupational health and safety standards.</li> <li>➤ Company systems and procedures conform to relevant SANS standards.</li> </ul>

**Note:** Reference to legal requirements should only be made where applicable.

#### 9.2.1.12 Articulation

The statement prepared for the DQP during Process 6.3.3 on articulation must be reflected here.

Articulation relates to the relationship of qualifications within the Occupational Qualifications Sub-Framework and between the different Sub-Frameworks and covers both horizontal and vertical progression options.

The statement on articulation must provide an indication on how this qualification will enable a learner to develop him/herself within the same NQF level and/or progress to higher NQF levels.

In the absence of qualifications at those levels, an indication of future possibilities should be provided. Reference can be made to qualifications aimed at similar or higher level occupations, i.e. which the learner can articulate to.

**Note 1:** Articulation never refers to qualifications on which a qualification is “built” and may therefore not refer to qualifications of feeder occupations.

**Note 2:** There should be consistency between the rationale of the qualification and the statement on articulation, i.e. when it is indicated in the rationale that the aim is to equip learners with knowledge that will assist them to progress into or pursue a qualification or career at the same or higher levels, then this should be confirmed by the statement on articulation.

**Note 3:** Reference can be made to qualifications related to specific occupations.

Not this	But something like this
<p><u>Fitter and Turner</u> This qualification articulates with qualifications within the mechanical trades related to the following occupations:</p> <ul style="list-style-type: none"> <li>○ Fitter and Turner supervisor</li> <li>○ Fabricator</li> <li>○ Fitter and Turner trainer</li> <li>○ Automotive Machinist</li> <li>○ Metal Machinist</li> <li>➤ Referring to specialisations such as Automotive machinists</li> <li>➤ There is not an occupation fabricator</li> </ul>	<p><u>Fitter and Turner</u> Horizontal articulation is possible to qualifications for other metal working machine tool setters and operators such as metal machinists</p> <ul style="list-style-type: none"> <li>● Refer to qualifications for unit group and specific occupations in the unit group.</li> </ul> <p>Vertical <u>articulation</u> is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications for mechanical engineering technicians</li> <li>○ qualifications for operations manager – manufacturing or manufacturing quality manager</li> <li>➤ Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>
<p><u>Plastics Manufacturing Machine Setter:</u> Horizontal Articulation There are currently no qualifications which provide for any horizontal articulation with this qualification. Vertical Articulation Currently there are no higher-level qualifications, which provide for vertical articulation with this qualification.</p> <ul style="list-style-type: none"> <li>➤ Referring to the current situation only</li> </ul>	<p><u>Plastics Manufacturing Machine Setter:</u> Horizontal Articulation is possible to qualifications for other industrial machinery mechanics and repairers such as industrial machinery mechanic and mechanical fitter.</p> <ul style="list-style-type: none"> <li>● Refer to qualifications for unit group and specific occupations in the unit group.</li> </ul> <p>Vertical articulation is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications for manufacturing engineering technicians.</li> <li>● Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>
<p><u>Port Manager:</u> This qualification can articulate to qualifications related to occupations in the area of Harbour and Port Service.</p> <ul style="list-style-type: none"> <li>● Referring to qualifications in general</li> </ul>	<p><u>Port Manager:</u> Horizontal Articulation is possible to qualifications for other supply and distribution managers such as logistics manager and supply and distribution manager.</p> <ul style="list-style-type: none"> <li>● Refer to qualifications for unit group and specific occupations in the unit group.</li> </ul> <p>Vertical articulation is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications such national diplomas or degrees in management</li> <li>● Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>
<p><u>Transport Coordinator:</u> This qualification may articulate to other qualifications in the area of Transport, Operations and Logistics.</p>	<p><u>Transport Coordinator:</u> Horizontal Articulation is possible to qualifications for other transport clerks</p> <ul style="list-style-type: none"> <li>● Refer to qualifications for the actual</li> </ul>

<ul style="list-style-type: none"> <li>• Referring to qualifications in general</li> </ul>	<p>occupation (as transport coordinator is a specialisation).</p> <p>Vertical articulation is possible to:</p> <ul style="list-style-type: none"> <li>○ qualifications for supply and distribution managers such as Road transport manager and fleet manager qualifications such national diplomas or degrees in management</li> <li>• Refer to qualifications for higher level related occupations in the same occupational field where possible.</li> </ul>
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### 9.2.1.13 International Comparability

Capture a statement on how the qualification compares with or relates to:

- qualifications elsewhere in the world or on other national or regional qualifications frameworks aimed at this occupation; and/or
- occupational development processes elsewhere in the world (for example training, apprenticeship or professional development schedules or programmes) aimed at this occupation

that were taken into consideration during the qualification development process. The qualification developed needs to be compared to these in terms of:

- the nature of training in terms of duration (including the ratio of time spent at the workplace to time spent on institutional training); and
- the content covered in the training.

Reference can also be made to international agreements on relevant qualifications or standards (where applicable) as well as best practices.

**Note:** According to SAQA the information should assist in determining the articulation possibilities of the qualification with qualifications on other national and regional qualification frameworks. Not only names of countries should be mentioned, but also the names of the actual qualifications considered for this purpose.

### 9.2.1.14 Entry requirements

Capture the educational entry requirement (specified during Process 3.4.1.1). This can either be a qualification or specific subjects from one of the other sub-frameworks of the NQF or an entry level occupational qualification that the learner must have obtained prior to enrolling for this qualification and may also reference years of experience.

Tips
Correct nomenclature should be used when indicating requirements for admission e.g. NSC, SC or NC(V) at NQF Level 4 instead of “grade 12”.
The words “equivalent to” may not be used.
Alternatives can be listed, but must be specific, e.g. specific subjects may be specified, e.g. NSC or NC(V) at NQF Level 4, with a pass rate in mathematics.
Years of experience in addition to educational requirements may also be specified. This might be necessary especially where the qualification might be seen as being at too high a level compared to the entry requirements.
Foundational Learning cannot be an entry requirement. It can only be an eligibility requirement for the external integrated summative assessment.
According to feedback from SAQA, no reference should be made to different institutional or provider policies as this is a national qualification. The SAQA criteria for the registration of qualifications should thus be ignored as the interpretation seems problematic.

**Note 1:** *According to feedback from SAQA, no reference should be made to different institutional or provider policies as this is a national qualification.*

**Note 2:** *Any legal or physical entry requirements must be captured under the notes section.*

### 9.2.1.15 Assessment Quality Partner Information

Capture the name of the Assessment Quality Partner, address, telephone number, email address and name of contact person. Separate the address items with commas.

### 9.2.2 Process 9.2.2: Capture the assessment specifications and qualification information

During process 9.2.2, additional information required to produce the assessment specifications document and qualification document is captured using the electronic occupational qualification capturing tool. The content must be checked against the construction rules and taking into consideration all examples and notes reflected in this manual and summarised below as a quick reference.

Some parts of the assessment specifications document, already captured in the curriculum, will automatically be transferred to the assessment specifications document as well as the qualification document.

### 9.2.2.1 Level

Capture the NQF Level of the qualification as determined during Process 6.3.4 under the heading “add level”.

60% of the total credits of the qualification must be at or above the level of the qualification for any qualification with a total credit value of less than and up to 120 credits. For any qualification with a credit value of more than 120 credits, a minimum of 72 credits must be at or above the level of the qualification.

### 9.2.2.2 Assessment model

Capture the essence of the model to be used and finalised during Step D5 (Process 7.2.5) as a short paragraph. This paragraph will also be reflected in the qualification document under the heading “Integrated summative assessment”

**Note1:** *Phase tests (where applicable) must be described as part of the overall assessment model. It must also be specified whether or not exit level outcomes identified for phase tests will be re-assessed during the final external assessment.*

**Note2:** *Assignments to be evaluated externally (where applicable) must be described as part of the overall assessment model.*

Construction Rules
<ul style="list-style-type: none"><li>• Start with the statement “An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.”</li><li>• Then add another paragraph by referring to the method, e.g. a written assessment, on the job evaluation, combination of a written test and a practical evaluation, etc.</li><li>• Then make reference to where the assessment will happen, e.g. accredited assessment centres, registered assessment sites or at workplaces.</li><li>• Then make a reference to who will evaluate the assessment, e.g. registered assessors, invigilators etc and who will be responsible for their registration or appointment.</li></ul>

Examples
<p>An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.</p> <p>The assessment will be conducted by means of a written examination at decentralised approved assessment sites and marked by staff appointed by the relevant AQP.</p> <p>Or</p> <p>The assessment will include a written phase test at an approved assessment site as well as a final assessment conducted in the workplace and evaluated by an assessor registered with the AQP.</p>

**Note 3:** *In the case of an occupation listed as a trade the following wording must be used after inserting the number of days: “The external integrated assessment will be conducted through a trade test as prescribed under section 26 D of the Skills Development Act and defined in the Trade Test Regulations. It will be conducted*

through an evaluation of written and practical tasks covering critical aspects in a simulated environment at an assessment centre accredited by QCTO and conducted by an assessor registered by the National Artisan Moderation Body (NAMB). The assessment will take place over a minimum of \_\_\_\_ days.”

**Note 4:** Only listed trades will be assessed at trade test centres. Other occupations using similar assessment models (i.e. where a practical evaluation is required) will use QCTO accredited assessment centres and then the name of the AQP that will be responsible for the registration of assessors must also be provided.

### 9.2.2.3 Integrated assessment focus area (including weight) as well as associated assessment criteria

#### Integrated assessment focus area (including weight)

Capture the integrated assessment focus areas (including weight) identified during Step D2.1 (Process 7.2.2.1) for the qualification and phase tests where relevant here.

**Note 1:** Capture the first integrated assessment focus area and then capture all its associated assessment criteria as outlined below before capturing the next integrated assessment focus area.

**Note 2:** The additional integrated assessment focus areas identified for part qualifications must not be captured here.

Construction Rules
<ul style="list-style-type: none"> <li>• Start the sentence with a verb in its simplest form (without an “s”), to describe what the learner has to do.</li> <li>• Then add a noun to describe “to what” or “with what”</li> <li>• Then describe the “how”, i.e. “by doing what” or “using what”.</li> <li>• Then add the weight as a percentage in brackets.</li> </ul>

Examples
<p><u>Fitter and Turner:</u></p> <p><b>Task Statement:</b> Perform engineering maintenance on mechanical components, subassemblies and machines (NQF Level 3)</p> <p><b>IAFA:</b> Identify and repair or replace out-of specification or mal-functioning components and sub-assemblies in mechanical machines to restore the machines to manufacturer’s specifications.</p> <p><u>Plastics Manufacturing Machine Setter:</u></p> <p><b>Task Statement:</b> Set-up and run plastics manufacturing machinery and equipment (NQF Level 4)</p> <p><b>IAFA 1:</b> Set up or programme and run plastics machinery to manufacture plastics products (40%)</p> <p><b>IAFA 2:</b> Prepare raw materials for the manufacturing of specified products (15%)</p> <p><u>Port Manager:</u></p> <p><b>Task Statement:</b> Maintain port support operations (NQF Level 6)</p> <p><b>IAFA:</b> Maintain port customer services and infrastructure support (25%)</p>

Transport coordinator:

**Task Statement:** Plan and prepare transport schedules (NQF Level 4)

**IAFA:** Determine customer and vehicle needs and prepare schedule and required documentation (50%)

Not this	But rather this
<p>Starting with “The ability to”</p> <p>The ability to repair, install and commission sub-assemblies and machines (40%)</p>	<p>Repair, install and commission sub-assemblies and machines (40%)</p>
<p><b>Task Statement:</b> Perform engineering maintenance on mechanical components, sub-assemblies and machines (NQF Level 3)</p> <p><b>Occupational responsibilities</b> relate to disassembling, cleaning and inspection of mechanical sub-assemblies as well as the replacement of components and sub-assemblies.</p> <p><b>Integrated assessment focus area:</b></p> <p>Perform engineering maintenance on mechanical components, sub-assemblies and machines.</p> <ul style="list-style-type: none"> <li>This is simply a restatement of the task and does not reflect the associated responsibilities.</li> </ul>	<p>IAFA 1: Inspect and repair or replace out-of-specification or faulty components and sub-assemblies in mechanical components, sub-assemblies and machines.</p> <p>Reflect what the learner has to do to “the what” to achieve “what” during the assessment process</p>
<p><b>Task Statement:</b> Set-up and run plastics manufacturing machinery and equipment (NQF Level 4)</p> <p><b>Occupational responsibilities</b> relate to handling, storing and recycling of material and start up, shut down, set-up or programme and monitor machinery.</p> <p><b>Integrated assessment focus areas:</b></p> <p>IAFA 1: Safely set-up, programme, start-up, optimise and shut-down the machine and auxiliary equipment (40%)</p> <p>And</p> <p>IAFA 2: Plan and prepare raw materials for manufacture (15%)</p> <ul style="list-style-type: none"> <li>The relation between these two IAFAs and the task statement is not obvious</li> <li>“Safely” is an assessment criterion.</li> </ul>	<p>IAFA 1: Set up or programme and run plastics machinery to manufacture <u>specified</u> plastics products (40%)</p> <ul style="list-style-type: none"> <li>Refer to type of products in order to create a link to IAFA 2</li> </ul> <p>IAFA 2: Prepare raw materials for the manufacturing of specified products (15%)</p>

<p><b>Task Statement:</b> Maintain port support operations (NQF Level 6)</p> <p><b>Occupational responsibility.</b> There is only one responsibility. The practical skills however address customer services and infrastructure.</p> <p><b>Integrated assessment focus area:</b></p> <p><u>IAFA:</u> Maintain port support operations (25%)</p> <ul style="list-style-type: none"> <li>This is simply a restatement of the task. Even though there is only one occupational responsibility, the practical skills reflect the areas of importance (this is also confirmed by the associated assessment criteria) that can better describe the IAFA.</li> </ul>	<p><u>IAFA:</u> Maintain port customer services and infrastructure support (25%)</p>
<p><b>Task Statement:</b> Plan and prepare transport schedules (NQF Level 4)</p> <p><b>Occupational responsibility.</b> There is only one responsibility. The practical skills however address the interpretation of customer needs and preparation of required documentation</p> <p><b>Integrated assessment focus area:</b></p> <p>Plan and prepare transport schedules (50%)</p> <ul style="list-style-type: none"> <li>This is simply a restatement of the task. Even though there is only one occupational responsibility, the practical skills reflect the areas of importance (this is also confirmed by the associated assessment criteria) that can better describe the IAFA.</li> </ul>	<p><u>IAFA:</u> Determine customer and vehicle needs and prepare transport schedules and required documentation (50%)</p>

### Associated assessment criteria

Capture the associated assessment criteria identified during Step D3 (Process 7.2.3) for each integrated assessment focus area.

Construction Rules
<ul style="list-style-type: none"> <li>The statement must contain a noun, verb and <i>quality criterion / criteria or modifying phrases</i></li> <li>Note: The quality criteria may also appear at the front of the statement</li> </ul>
Examples
<p><u>Fitter and Turner:</u></p> <p><b>IAFA:</b> Identify and repair or replace out-of-specification or mal-functioning components and sub-assemblies in mechanical machines to restore the machines to manufacturer's specifications</p> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>Descriptions of safe working procedures, safety precautions and Personal Protective Equipment required for engineering maintenance tasks are accurate and complete</li> <li>Repairs to mechanical sub-assemblies and machines meet the manufacturer's specifications</li> </ul>



Plastics Manufacturing Machine Setter:

**IAFA 1:** Set up or programme and run plastics machinery to manufacture specified plastics products (40%)

- Pre-start up checks are performed and all safety devices are tested according to the standard operating procedures
- Deviations and non-conformances are identified through monitoring the process and inspecting and testing the product

**IAFA 2:** Prepare raw materials for the manufacturing of specified products (15%)

**Associated assessment criteria:**

- Materials and additives are prepared according to the specification
- Materials are blended according to the recipe

Port Manager:

**IAFA:** Maintain port customer services and infrastructure support (25%)

**Associated assessment criteria:**

- Recommendations to improve customer service reflect customer service principles
- The infrastructure development and maintenance plan reflects the manufacturers' specifications and maintenance schedules

Transport Coordinator:

**IAFA:** Determine customer and vehicle needs and prepare schedule and required documentation (50%)

**Associated assessment criteria:**

- Vehicles are selected and classified according the Road Traffic Act, customer requirements and standard procedures
- Transport schedules meet customer requirements and specifications
- Completed documents meet company standards and legal requirements

Not this	But rather this
<p><u>Fitter and Turner:</u></p> <p><b>IAFA:</b> Identify and repair or replace out-of specification or faulty components and sub-assemblies in mechanical machines to restore machines to manufacturer's specifications</p> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"><li>• Safe work procedures, precautions and Personal Protective Equipment required for engineering maintenance tasks can be described</li><li>➤ An assessment task without measurement criteria</li></ul>	<p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"><li>• Descriptions of safe working procedures, safety precautions and Personal Protective Equipment required for engineering maintenance tasks are accurate and complete</li></ul>

<p><u>Plastics Manufacturing Machine Setter:</u></p> <p><b>IAFA 1:</b> Set up or programme and run plastics machinery to manufacture <u>specified</u> plastics products (40%)</p> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Pre-start up checks are performed and all safety devices are tested <ul style="list-style-type: none"> <li>➤ No measurement criteria</li> </ul> </li> <li>• Manufacturing process is monitored and the quality of the plastic product is inspected and tested to achieve optimum parameters <ul style="list-style-type: none"> <li>➤ These are only activities</li> <li>➤ No measurement criteria</li> </ul> </li> </ul> <p><b>IAFA 2:</b> Prepare raw materials for the manufacturing of specified products (15%)</p> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Materials and additives are identified according to production requirements</li> <li>• Materials are prepared according to specifications</li> <li>• Blended materials are loaded into the hopper <ul style="list-style-type: none"> <li>➤ No measurement criteria</li> </ul> </li> </ul>	<p><b>Associated assessment criteria</b></p> <ul style="list-style-type: none"> <li>• Pre-start up checks are performed and all safety devices are tested according to the standard operating procedures</li> <li>• Deviations and non-conformances are identified through monitoring the process and inspecting and testing the product</li> </ul> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Identified materials and additives meet production requirements</li> <li>• Materials are prepared according to specifications</li> <li>• Blended materials are loaded into the hopper following the correct safety procedures</li> </ul>
<p><u>Port Manager:</u></p> <p><b>IAFA:</b> Maintain port customer services and infrastructure support (25%)</p> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Customer service plan is comparable to best practice in the industry <ul style="list-style-type: none"> <li>➤ Who determines what best practice is?</li> </ul> </li> <li>• Audit of Airport / Harbour infrastructure development and maintenance plan show appreciation of manufacture specification and scheduled action plan <ul style="list-style-type: none"> <li>➤ Poorly-stated measurement criteria</li> </ul> </li> <li>• Set key performance indicators for the effective operations of a port <ul style="list-style-type: none"> <li>➤ This is an activity without measures</li> </ul> </li> </ul>	<p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Recommendations on how to improve customer service reflect customer service principles</li> <li>• The infrastructure development and maintenance plan reflects the manufacturers' specifications and maintenance schedules</li> <li>• Key performance indicators for the effective operations of a port are realistic, practical and meet budgetary constraints</li> </ul>

<p><u>Transport Coordinator:</u></p> <p><b>IAFA:</b> Determine customer and vehicle needs and prepare a transport schedule and required documentation (50%)</p> <p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Customer requirements and specifications are considered in the planning and preparation of the transportation schedule <ul style="list-style-type: none"> <li>➤ Poorly stated measurement criteria – simply considering customer requirements does not mean that the plan meets those requirements</li> </ul> </li> <li>• Documents are selected and completed according to standard operational procedures and validated against Legislation <ul style="list-style-type: none"> <li>➤ Construction is clumsy</li> </ul> </li> </ul>	<p><b>Associated assessment criteria:</b></p> <ul style="list-style-type: none"> <li>• Transportation schedules meet customer requirements and specifications</li> <li>• Completed documents meet company standards and legal requirements</li> </ul>
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#### 9.2.2.4 Assessment standards for phases

Capture the phase test information here. This includes the following:

##### Purpose

Capture the purpose statement developed during Step D1.2 (Process 7.2.1.2).

Construction Rules
<ul style="list-style-type: none"> <li>• Start with “The purpose of this phase test is to determine the learner’s”...</li> <li>• Then add a descriptor such as “competence” or “knowledge” or “ability” followed by a description of what will be assessed.</li> <li>• Then add a reason why the assessment is necessary or the period when the assessment will take place.</li> </ul>

Examples
<ul style="list-style-type: none"> <li>• The purpose of this phase test is to determine the learner’s competence to prune. Assessment will be conducted during July in the pruning season.</li> <li>• The purpose of this phase test is to determine the learner’s knowledge in terms of blasting as required by the mine health and safety regulations as a prerequisite to obtain a blasting certificate before commencing with the workplace component.</li> </ul>

##### Integrated assessment focus areas relevant to the phase tests

Copy the integrated assessment focus areas (including weight) identified during Step D2.1 (Process 7.2.2.1) for the phase test here.

**Note:** *These integrated assessment focus areas is also captured for the qualification*

### Associated assessment criteria

Copy the associated assessment criteria identified during Step D3.1 (Process 7.3.2.1) for the relevant integrated assessment focus area identified for the phase test here.

**Note:** *These associated assessment criteria is also captured for the qualification*

### **9.2.2.5 Assessment standards for part qualifications**

Capture the part qualification information here. This includes the following:

#### Purpose

Capture the purpose statement developed during Step D1.3 (Process 7.2.1.3).

#### Integrated assessment focus areas relevant to the part qualification

Capture the integrated assessment focus areas (including weight) identified during Step D2.2 (Process 7.2.2.2) for the part qualification here.

**Note:** *These integrated assessment focus areas are not captured for the qualification*

### Associated assessment criteria

Capture the associated assessment criteria identified during Step D3.2 (Process 7.2.3.2) for the relevant integrated assessment focus area identified for the phase test here.

**Note:** *These associated assessment criteria are not captured for the qualification*

### **9.2.2.6 Assignments to be evaluated externally**

Capture the assignments to be evaluated externally and identified during Step C1.8 (Process 6.2.1.8) here. This includes the following:

#### Description

#### Associated assessment criteria

**Note:** *This information must be exactly the same as the information captured in the work experience component.*

#### Critical aspects of the internal assessments to be assessed externally

This section will be deleted.

### **9.2.2.7 Criteria for registration of assessors**

The criteria to be met for registration as assessors as determined during Step D8 (Process 7.2.8), must be captured here.

Construction Rules
Provide information on the following: <ul style="list-style-type: none"> <li>• Subject matter expertise.</li> <li>• Years of practice.</li> <li>• Assessment experience.</li> <li>• Membership of a Professional Body.</li> <li>• Legal requirements.</li> </ul>

Examples
<ul style="list-style-type: none"> <li>• Expertise: Practicing plumber</li> <li>• Years of practice: 5 years</li> <li>• Assessment Experience: Assessment Unit Standards</li> <li>• Membership of a Professional Body: None</li> <li>• Legal Requirements: None</li> </ul>

### 9.2.2.8 Registered qualifications and/or learning programmes to be replaced

#### Registered qualifications

The Qualifications and/or SAQA registered learning programmes, under the scope of the QCTO, recorded during Process 6.2.4.2 and signed off by the DQP after consultation with the relevant SETAs during Process 8.2, to be replaced must be captured here.

The SAQA ID, the qualification title and NQF Level must be captured.

Examples
<ul style="list-style-type: none"> <li>• SAQA ID 63473 NC: Mechanical Engineering: Fitting Manufacturing and Engineering NQF Level 2</li> <li>• SAQA ID 63469 NC: Mechanical Engineering: Fitting Manufacturing and Engineering NQF Level 3</li> <li>• SAQA ID 63479 Further Education and Training Certificate: Mechanical Engineering: Fitting Manufacturing and Engineering NQF Level 4</li> </ul>

## Recorded trades

Capture the statement “This qualification covers the following trades as recorded on the NLRD”, followed by a list of recorded trades.

Start with SAQA ID and the number, followed by the trade titles as captured on the NLRD and the sector that registered the trade.

Examples
<ul style="list-style-type: none"><li>• SAQA ID 61033, F010, Fitter and Turner, Automobile Manufacturing</li><li>• SAQA ID 61036, F013, Fitter and Turner, Coal</li><li>• SAQA ID 61037, F014, Fitter and Turner, ESKOM</li><li>• SAQA ID 61040, F017, Fitter and Turner, Explosives</li><li>• SAQA ID 61048, F024, Fitter and Turner, Government</li><li>• SAQA ID 61109, F093, Fitter and Turner, Carbonated soft drink</li><li>• SAQA ID 61068, F043, Fitter and Turner, Mining</li><li>• SAQA ID 61073, F048, Fitter and Turner, Motor</li><li>• SAQA ID 61084, F05A, Fitter and Turner, Aerospace</li><li>• SAQA ID 61087, F062, Fitter and Turner, Tyre and Rubber</li><li>• SAQA ID 61134, F121, Fitter and Turner, Sugar</li><li>• SAQA ID 61137, FS03, Fitter and Turner, Mining</li></ul>

### 9.2.2.9 Rationale

Capture the rationale statement formulated during Step B9.5 (Process 3.3.9.5) here. The rationale must reflect the following:

- Details of the reasoning that led to identifying the need for the qualification,
  - e.g. new occupation, existing qualifications outdated, classified as a scarce occupation, etc.
- The specific needs that the qualification will meet in the sector for which it is to be developed, including consultation with a recognised professional body or industry body.
- The benefits it will have for society and the economy, for example the range of typical learners and the occupations, jobs or areas of activity in which the qualifying learners will operate, and the contribution to national strategies, where applicable,
  - e.g. reference to the green economy
- Where applicable, the learning pathway where the qualification will reside in terms of the occupation,
  - e.g. if it is an entry into a specific occupation or a further specialisation to allow for career progression.

**Note 1:** No references should be made to specific years or number of learners.

**Note 2:** This section must correlate with Paragraph 1.1 in the DQP Process report.

### 9.2.2.10 Qualification purpose

Capture the sentence, “The purpose of this qualification is to prepare a learner to operate as” followed by adding an “a” or “an” followed by the occupational or specialisation title. Each word in the title must start with a capital letter and must be in singular form.

Then capture the occupational purpose statement identified during Step B7.3 and captured in the curriculum (see paragraph 9.2.1.6) to complete the paragraph.

Examples
<u>Fitter and Turner:</u> A Fitter and Turner fabricates metal parts and fits, assembles, maintains and repairs mechanical components, sub-assemblies and machines.
<u>Plastics Manufacturing Machine Setter:</u> A Plastics Manufacturing Machine Setter manufactures plastics products through planning, preparing, setting-up and maintaining optimum machine settings on plastics production equipment
<u>Port Manager:</u> A Port Manager plans, organizes, directs, controls and coordinates the operations of an airport or harbour.
<u>Transport Coordinator:</u> A Transport Coordinator compiles and keeps records of transportation operations and coordinates the timing of passenger services.

Then add the sentence, “A qualified learner will be able to:”, followed by the occupational tasks developed during Step B7.1 and captured in the curriculum (see paragraph 9.2.1.6) excluding the reference to the NQF Level.

**Note:** No changes should be made to the occupational task statements, i.e. the wording must be exactly the same as in the curriculum but the NQF level must not be reflected.

### 9.2.2.11 Notes

#### Foundational Learning

If the Qualification is at NQF Level 2, 3 or 4 capture the following standard statement:

Foundational Learning Competence is a pre-requisite for access to the external integrated summative assessment.

#### Additional legal or physical entry requirements

Capture any required physical or legal registration requirements identified during Process 3.4.1.2) here.

## Part qualifications

**Title** Capture the Title identified during Step B6.1 (Process 3.3.6.1)

**Modules:** The system will generate a list. Select the relevant modules to be completed for the part qualification

### **9.3 Process 9.3 Finalise the process report (DQP)**

The DQP is responsible for developing the process report. Some of this information will be obtained from the QDF during Process 4.4 and Process 8.4. The DQP must evaluate the information, include it in the process report and send a copy to the QDF for the capturing of the occupational qualification.

**Note:** *The development of this report is the responsibility of the DQP and is not part of the normal functions of the QDF. The QDF (unless a permanent staff member of the DQP) may however not obtain articulation agreements with providers from other sub-frameworks or with other QCs.*

#### **9.3.1 Process 9.3.1: Sign and submit all documents**

Sign the curriculum and where applicable ensure that the learner QDF also signs.

Submit all documents to the DQP for signature and delivery of cover pages to the AQP and QCTO.

## **PROCESS 10: QCTO EVALUATES SUBMISSIONS**

The QCTO is responsible for the evaluation of the submissions.

If there are small changes related to numbering etc in the curriculum, these will be referred to the QDF for correcting and the DQP will not be notified if the corrections are submitted within 2 weeks.



## ANNEXURE A: ATTENDANCE REGISTER TEMPLATE

Type of meeting: \_\_\_\_\_

Date of meeting 1: \_\_\_\_\_

Date of meeting 2: \_\_\_\_\_

Date of meeting 3: \_\_\_\_\_

Name	Surname	Organisation and job title	Relevant qualification and years experience	Signature day 1	Signature day 2	Signature day 3
1.						
On behalf of 1						
On behalf of 1						
On behalf of 1						
2.						

<b>Name</b>	<b>Surname</b>	<b>Organisation and job title</b>	<b>Relevant qualification and years experience</b>	<b>Signature day 1</b>	<b>Signature day 2</b>	<b>Signature day 3</b>
On behalf of 2						
On behalf of 2						
On behalf of 2						
3.						
On behalf of 3						
On behalf of 3						
On behalf of 3						

Name	Surname	Organisation and job title	Relevant qualification and years experience	Signature day 1	Signature day 2	Signature day 3
4.						
On behalf of 4						
On behalf of 4						
On behalf of 4						
5.						
On behalf of 5						
On behalf of 5						

Name	Surname	Organisation and job title	Relevant qualification and years experience	Signature day 1	Signature day 2	Signature day 3
On behalf of 5						
6.						
On behalf of 6						
On behalf of 6						
On behalf of 6						
7.						
On behalf of 7						

## **GUIDELINES:**

# **USING THE LARF TO CONTEXTUALISE THE SAQA LEVEL DESCRIPTORS FOR ALLOCATING NQF LEVELS TO OCCUPATIONAL QUALIFICATIONS**

## CONTENTS

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Inputs prepared by Christoph Vorwerk

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## 1 PURPOSE OF THIS DOCUMENT

The purpose of this document is to assist Qualification Development Facilitators to allocate NQF levels to occupational tasks through interpreting stakeholder inputs.

The NQF level descriptors are broadly conceptualised from a more academic perspective in which the outputs are generally documents. To include the world-of-work the level descriptors make reference to “field, discipline or practice,” where the word “practice” links to what people do when they perform in a professional or occupational context.

This document describes a structured approach to determining levels of complexity within the field of professional and occupational practice.

## 2 BACKGROUND

### 2.1 Occupational Levels

One of the first attempts to identify occupational levels considered the Requisite Organisation Theory<sup>1</sup>, formerly known as Stratified Systems Theory, which was developed by Elliott Jaques. Jaques was a Canadian organisational psychologist who evolved this model over a period of more than 50 years ago. The theory is based on scientific research by Elliott Jaques and by many other researchers around the world, including South Africa. Jaques himself indicated that these levels were not qualification or grading levels but innate levels developed by those in the context of their work.

The key to determining levels of work used by Jaques was the “time-span of discretion”. These principles were used as the starting point for unpacking levels of work reflected in occupational curricula.

### 2.2 The Time-Span of Discretion

Any task has a "what needs to be done" and a "by when". The "by when" is what Jaques terms the time-span of discretion. For example, the longest "by when" for a business unit manager might be the responsibility to build a new power station and bring it on line within a time frame of seven years. For a first-line manager the longest "by when" might be the 6 months it takes to induct and train a new member of staff.

In Jaques' system, any two jobs with the same time span have the same level of work. You can use time span to assess human capability or use human capability to determine time span.

### 2.3 Measuring the Time-Span of a Job

Since people are not accustomed to thinking of jobs in terms of time-span, they find assessing time-span difficult. Nevertheless, Jaques and those that have implemented the system in organisations have found that it is an objective measure and that once trained, people can reliably identify the time-span of a job.

### 2.4 The Time-Span of Each Strata

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<sup>1</sup> unified whole system model for effective managerial leadership

Jacques identified different types of work and described these in terms of strata, initially 5 levels, later 7.

Here are the time-spans Jaques associates with each stratum:

- STRATA I 1 day – 3 months
- STRATA II 3 months – 1 year
- STRATA III 1 – 2 years
- STRATA IV 2 – 3 years
- STRATA V 3 – 5 years
- STRATA VI 5 – 10 years
- STRATA VII 10 – 20 years

### 3 DEVELOPMENT OF THE GUIDELINES FOR INTERPRETING SAQA LEVEL DESCRIPTORS

After examining a range of occupational tasks in relation to Jaques' strata it became apparent that what defines the strata and the NQF levels is the management of change within practitioner's span of control. Change is both in the present (divergence from the norm) as well as the future, (adapting current practices to align with projected future demands).

The guidelines below were developed to ensure that occupational tasks are pitched at the appropriate NQF level for both the purposes of learning as well as qualification design. Allocation of levels no longer has to be an educated guess.

The 7 strata was extended to 10 levels, extending the lower strata since Jaques only distinguished between operators and supervisors at the lowest strata. Each level was then expanded and unpacked across the following dimensions:

- Typical activities
- (Work) Role
- Workplace focus<sup>2</sup>

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<sup>2</sup> Levels, Activities, Role and Focus led to the outcomes being dubbed the "LARF tool"



The initial expansion looked like this:

Level	Typical activities	Role	Workplace Focus
10	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession
9	Set and implement strategies	Leading and directing	The 'business landscape' or profession
8	Manage or design systems	Resource management	Policy, resource allocation
7	Manage or design processes	Changed practices	New technology, systems
6	Develop and implement changes	Optimisation	Improvements
5	Maintain efficiencies	Stability and consistency	Systems
4	Setup processes and solve process problems	Process management	Process data
3	Adjust, maintain and oversee	Procedures	Productivity
2	Monitor, support	Operations	Machinery
1	Perform elementary tasks	Task	Machines, tools

This did not provide sufficient guidance so a set of process questions was also developed to unpack each item and provide examples for each domain at each level.

The following development rules were applied:

*What are the predominant, common things people routinely do? – Stated as Verb + noun*

*What is the purpose of these typical tasks? What is the characteristic or expected function of a person performing the typical activities? – Stated as To+ verb +noun + [adverbial phrase]*

*What are the things, people or situations that the person is expected to interact or deal with? - Stated as Noun*

This then led to the fuller set of guidelines outlined below.

## 4 THE LARF

Level	Typical activities	Role	Workplace Focus	Time span of Discretion
<b>10</b>	Envisioning future scenarios	Visionary leadership	Future shape of organisation, industry, profession	10-15 years
	Envision conceptualise and advocate strategies in anticipation of changing environments	To provide global direction and leadership	Practices, paradigms, knowledge	
	Conceptualise and introduce new practices, knowledge	To provide foresight	The future social, political and economic systems	
	Note: Level 10 will not be 'taught' it can only be learned and only applies to exceptional leaders		To generate and provide wisdom	
<b>9</b>	Set and implement strategies	Leading and directing	The 'business landscape' or profession	5-10 years
	Plan and secure capital - financial, intellectual, social, human	To monitor and evaluate performance against organisational objectives and strategies	Stakeholder wealth and well-being	
	Enhances and undertakes stakeholder and investor relationships	To act as a transformational leader	Professional boundaries and future 'shape' of professional activities	
	Formulate and implement strategy	To provide overall direction and management	Governance	
	Evaluate the impact and sustainability of implemented strategies		Organisational policy framework	
	Promote and sustain corporate citizenship		Global operating environment	
Establishes and stewards brands		Capital, financial, human, intellectual, social		

	Manage and report on the co. carbon footprint			
	To grow the intellectual capital of the business			
	Drive and promote triple bottom line in all marketing and sales decisions			
	Promotes corporate social investment			
	Driving transformation			
<b>8</b>	Manage or design systems	Resource management	Policy, resource allocation	3-5 years
	Contributes and informs the organisational strategy	To manage specialist operations, eg accounting, personnel, operations, marketing	Workforce stability	
	Manage stakeholders expectations and roles	To formulate corporate policies	Stakeholder alignment	
	Advocacy		Organisational culture & values	
	Corporate citizenship		Value chain/proposition	
	Synergy		Continuous professional development	
	Research and develop new or revised systems, technology practices	To manage roles and relationships between elements of the system		
	perform environmental scans	To manage knowledge		
	needs analysis			
	Assess impact of external conditions			
	Interpret metrics			
<b>7</b>	Manage or design processes	Changed practices	New technology, systems	1-3 years
	Negotiate contractual terms and conditions	To ensure continuous improvement	Discipline or practice	
	Manage policy compliance	To reduce risk	Technology, professional practices	
	HR	To ensure compliance with	Tactics	

		legislation		
	Procurement		Innovation	
	Finance		External environment	
	Quality			
	Safety			
	Mobilise and manage resources		Stakeholder and environment	
	Contract services			
<b>6</b>	Develop and implement changes	Optimisation	Improvements	6 mth -1yr
	Investigate and evaluate process options	To respond to changing external and internal needs	Operational performance and risks	
			Bottlenecks, trends	
	Collect, evaluate and build a case based on a variety of types of data or information, legal and ethical considerations	To implement improved technologies, revised systems	Departments or division	
	Provide advice on systems, technology and methods	To bed down revised practices and systems	Technology, discipline and associated practices	
	Implement projects or change processes	To optimise systems, processes and use of resources		
<b>5</b>	Maintain efficiencies	Stability and consistency	Systems	3-6 mth
	Plan and implement processes and operations	To co-ordinate supply of resources	Operational system	
	Lead and direct teams and progress	To ensure consistency of outputs	Staff	
	Control and manage performance	To implement improved technology and techniques	Market requirements; client satisfaction	
	Co-ordinate operations with other functions	To improve skill level, satisfaction; teams ethics	Environment	
	Implement improvements		Allocated budget	
			Ethics, good practices	
<b>4</b>	Setup processes and solve process problems	Process management	Process data	1-3 mth

	Initiate activities	To troubleshoot	Workflow	
	Interpret work instructions	To ensure smooth workflow, according to schedule, quality standards, safely	Client satisfaction	
	Schedule	To comply with legal requirements	Work or service related data, cost	
	Organise resources	To ensure efficient use of resources		
	Allocate work and resources to team	To ensure availability and reliability		
	Perform technical tasks	To lead and direct operations	Team	
	Install, assemble, repair			
	Provide services	To identify and anticipate problems	Environmental conditions	
	Attend to client needs			
	Ensure progress & completion	To apply technical judgement		
<b>3</b>	Adjust, maintain and oversee	Procedures	Productivity	1wk
	Plan work process	To complete tasks within required time	Quality	
	Allocate tasks	To ensure procedures are applied consistently		
	Monitor progress of work	To ensure work standards are met	Delivery targets	
	Use equipment and instruments	To ensure availability of equipment and instruments	Wastage	
	Contribute to team efforts and objectives	To ensure team works effectively and efficiently	Safety	
<b>2</b>	Monitor, support	Operations	Machinery	1day
	Perform repetitive work where some discretion is required	To support operations and processes	Equipment, machinery (semi-automatic, single purpose), instruments, materials	
	Monitor quality of materials, information, process and outputs	To respond to deviations	Internal and external customers	
	Record, organise and report readily available information	To maintain operations through minor adjustments		

	To work as a productive and active member of a team	To contribute to team outputs	Own and other teams
	Operate equipment and machinery	To apply operating procedures	Product or service
	Make simple settings and adjustments		
	Perform reception duties		
	Interpret work instructions	To confirm compliance with standards	Operating procedures and standards
<b>1</b>	Perform elementary tasks	Task	Machines, tools
	Perform repetitive, manual tasks with little discretion	To provide support	Basic tools, materials, waste
	Identify and remove waste	To comply with rules	Standard forms
	Co-operate with fellow workers		
	Sequence task components		Team
	Provide feedback to supervisor		Environmental hazards

## 5 THE SAQA LEVEL DESCRIPTORS AND ASSOCIATED LARF INTERPRETATION

LEVEL 10	
SAQA	<p><b>Scope of knowledge:</b> Demonstrate expertise and critical knowledge in an area at the forefront of the field, discipline or practice; and Demonstrate an ability to conceptualise new research initiatives, and create new knowledge or practice.</p> <p><b>Knowledge literacy:</b> Demonstrate an ability to contribute to scholarly debates around theories of knowledge and processes of knowledge production in an area of study or practice.</p> <p><b>Method and Procedure:</b> Demonstrate an ability to develop new methods, techniques, processes, systems or technologies in original, creative and innovative ways appropriate to specialised and complex contexts.</p> <p><b>Problem solving:</b> Demonstrate an ability to apply specialist knowledge and theory in critically reflexive, creative and novel ways to address complex practical and theoretical problems.</p> <p><b>Ethics and professional practice:</b> Demonstrate an ability to identify, address and manage emerging ethical issues, and to advance processes of ethical decision-making, including monitoring and evaluation of the consequences of these decisions where appropriate.</p> <p><b>Accessing, processing and managing information:</b> Demonstrate an ability to make independent judgements about managing incomplete or inconsistent information or data in an iterative process of analysis and synthesis, for the development of significant original insights into new complex and abstract ideas, information or issues.</p> <p><b>Producing and communicating information:</b> Demonstrate an ability to produce substantial, independent, in-depth and publishable work which meets international standards, is considered to be new or innovative by peers, and makes a significant contribution to the discipline, field, or practice; and Ability to develop a communication strategy to disseminate and defend research, strategic and policy initiatives and their implementation to specialist and non-specialist audiences using the full resources of an academic/professional, or occupational discourse.</p> <p><b>Context and systems:</b> Demonstrate an understanding of theoretical underpinnings in the management of complex systems to achieve systemic change; and Demonstrate an ability to independently design, sustain and manage change within a system or systems.</p> <p><b>Management of learning:</b> Demonstrate an ability to demonstrate intellectual independence, research leadership and management of research and research development in a discipline, field or practice.</p> <p><b>Accountability:</b> Demonstrate an ability to operate independently and take full responsibility for his/her work, and where appropriate to lead, oversee and be held ultimately accountable for the overall governance of processes and systems.</p>

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ): <b>Envisioning future scenarios</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Visionary leadership</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ): <b>Future shape of organisation, industry, profession</b>
	Envision conceptualise and advocate strategies in anticipation of changing environments	To provide global direction and leadership	Practices, paradigms, knowledge
	Conceptualise and introduce new practices, knowledge	To provide foresight	The future social, political and economic systems
		To generate and provide wisdom	
Note:	Level 10 will not be 'taught' it can only be learned and only applies to exceptional leaders		



**LEVEL 9**

SAQA

**Scope of knowledge:**

Demonstrate specialist knowledge to enable engagement with and critique of current research or practices; and  
Demonstrate an advanced scholarship or research in a particular field, discipline or practice.

**Knowledge literacy:**

Demonstrate an ability to evaluate current processes of knowledge production and to choose an appropriate process of enquiry for the area of study or practice.

**Method and Procedure:**

Demonstrate a command of and ability to design, select and apply appropriate and creative methods, techniques, processes or technologies to complex practical and theoretical problems.

**Problem solving:**

Demonstrate an ability to use a wide range of specialised skills in identifying, conceptualising, designing and implementing methods of enquiry to address complex and challenging problems within a field, discipline or practice; and  
Demonstrate an understanding of the consequences of any solutions or insights generated within a specialised context.

**Ethics and professional practice:**

Demonstrate an ability to make autonomous ethical decisions which affect knowledge production, or complex organisational or professional issues, an ability to critically contribute to the development of ethical standards in a specific context.

**Accessing, processing and managing information:**

Demonstrate an ability to design and implement a strategy for the processing and management of information, in order to conduct a comprehensive review of leading and current research in an area of specialisation to produce significant insights.

**Producing and communicating information:**

Demonstrate an ability to use the resources of academic and professional/occupational discourses to communicate and defend substantial ideas that are the products of research or development in an area of specialisation; and  
Use a range of advanced and specialised skills and discourses appropriate to a field/discipline/practice, to communicate to a range of audiences with different levels of knowledge/expertise.

**Context and systems:**

Demonstrate an ability to make interventions at an appropriate level within a system, based on an understanding of hierarchical relations within the system, and the ability to address the intended and unintended consequences of interventions.

**Management of learning:**

Demonstrate an ability to develop his/her own learning strategies which sustain independent learning and academic or professional development, and can interact effectively within the learning or professional group as a means of enhancing learning.

**Accountability:**

Demonstrate an ability to operate independently and take full responsibility for his/her own work, and where appropriate to account for leading and initiating processes and implementing systems, ensuring good resource management and governance practices.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ): <b>Set and implement strategies</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Leading and directing</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ) <b>The 'business landscape' or profession</b>
	Plan and secure capital - financial, intellectual, social, human	To monitor and evaluate performance against organisational objectives and strategies	Stakeholder wealth and well-being
	Enhances and undertakes stakeholder and investor relationships	To act as a transformational leader	Professional boundaries and future 'shape' of professional activities
	Formulate and implement strategy	To provide overall direction and management	Governance
	Evaluate the impact and sustainability of implemented strategies		Organisational policy framework
	Promote and sustain corporate citizenship		Global operating environment
	Establishes and stewards brands		Capital, financial, human, intellectual, social
	Manage and report on the co. carbon footprint		
	To grow the intellectual capital of the business		
	Drive and promote triple bottom line in all marketing and sales decisions		
	Promotes corporate social investment		
	Driving transformation		

**LEVEL 8**

SAQA

**Scope of knowledge:**

Demonstrate knowledge of and engagement in an area at the forefront of a field, discipline or practice; and  
Demonstrate an understanding of the theories, research methodologies, methods and techniques relevant to the field, discipline or practice; and  
Demonstrate an understanding of how to apply this knowledge in a particular context.

**Knowledge literacy:**

Demonstrate an ability to interrogate multiple sources of knowledge in an area of specialisation, and to evaluate knowledge and processes of knowledge production.

**Method and Procedure:**

Demonstrate an understanding of the complexities and uncertainties of selecting, applying or transferring appropriate standard procedures, processes or techniques to unfamiliar problems in a specialised field, discipline or practice.

**Problem solving:**

Demonstrate an ability to use a range of specialised skills to identify, analyse and address complex and/or abstract problems drawing systematically on the body of knowledge and methods appropriate to a field, discipline or practice.

**Ethics and professional practice:**

Demonstrate an ability to identify and address ethical issues based on critical reflection on the suitability of different ethical value systems to specific contexts.

**Accessing, processing and managing information:**

Demonstrate an ability to critically review information gathering, synthesis of data, evaluation and management processes in specialised contexts in order to develop creative responses to problems and issues.

**Producing and communicating information:**

Demonstrate an ability to present and communicate academic, professional or occupational ideas and texts effectively to a range of audiences, offering creative insights, rigorous interpretations and solutions to problems and issues appropriate to the context.

**Context and systems:**

Demonstrate an ability to operate effectively within a system, or manage the system based on an understanding of the roles and relationships between elements within the system.

**Management of learning:**

Demonstrate an ability to apply in a self-critical manner learning strategies which effectively address his/her professional and ongoing learning needs and the professional and ongoing learning needs of others.

**Accountability:**

Demonstrate an ability to take full responsibility for his/her work, decision making and use of resources, and full accountability for the decisions and actions of others where appropriate.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ) <b>Manage or design systems</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Resource management</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ): <b>Policy, resource allocation</b>
	Contributes and informs the organisational strategy	To manage specialist operations, eg accounting, personnel, operations, marketing	Workforce stability
	Manage stakeholders expectations and roles	To formulate corporate policies	Stakeholder alignment
	Advocacy		Organisational culture & values
	Corporate citizenship		Value chain/proposition
	Synergy		Continuous professional development
	Research and develop new or revised systems, technology practices	To manage roles and relationships between elements of the system	
	Perform environmental scans	To manage knowledge	
	Needs analysis		
	Assess impact of external conditions		
	Interpret metrics		

**LEVEL 7**

SAQA

**Scope of knowledge:**

Demonstrate integrated knowledge of the central areas of one or more fields, disciplines or practices, including an understanding of and an ability to apply and evaluate the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice; and  
Demonstrate detailed knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices.

**Knowledge literacy:**

Demonstrate an understanding of knowledge as contested and an ability to evaluate types of knowledge and explanations typical within the area of study or practice.

**Method and Procedure:**

Demonstrate an understanding of a range of methods of enquiry in a field, discipline or practice, and their suitability to specific investigations; and  
Demonstrate an ability to select and apply a range of methods to resolve problems or introduce change within a practice.

**Problem solving:**

Demonstrate an ability to identify, analyse, evaluate, critically reflect on and address complex problems, applying evidence-based solutions and theory-driven arguments.

**Ethics and professional practice:**

Demonstrate an ability to take decisions and act ethically and professionally, and the ability to justify those decisions and actions drawing on appropriate ethical values and approaches, within a supported environment.

**Accessing, processing and managing information:**

Demonstrate an ability to develop appropriate processes of information gathering for a given context or use; and  
Ability to independently validate the sources of information, and evaluate and manage the information.

**Producing and communicating information:**

Demonstrate an ability to develop and communicate his/her ideas and opinions in well-formed arguments, using appropriate academic, professional, or occupational discourse.

**Context and systems:**

Demonstrate an ability to manage processes in unfamiliar and variable contexts, recognising that problem solving is context-and system-bound, and does not occur in isolation.

**Management of learning:**

Demonstrate an ability to identify, evaluate and address his/her learning needs in a self-directed manner, and to facilitate collaborative learning processes.

**Accountability:**

Demonstrate an ability to take full responsibility for his/her work, decision making and use of resources and limited accountability for the decisions and actions of others in varied or ill-defined contexts.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do:</i> ) <b>Manage or design processes</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Changed Practices</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ): <b>New technology, systems</b>
	Negotiate contractual terms and conditions	To ensure continuous improvement	Discipline or practice
	Manage policy compliance	To reduce risk	Technology, professional practices
	HR	To ensure compliance with legislation	Tactics
	Procurement		Innovation
	Finance		External environment
	Quality		
	Safety		
	Mobilise and manage resources		Stakeholder and environment
	Contract services		

**LEVEL 6**

SAQA

**Scope of knowledge:**

Demonstrate detailed knowledge of the main areas of one or more fields, disciplines or practices, including an understanding of and an ability to apply the key terms, concepts, facts, principles, rules and theories of that field, discipline or practice to unfamiliar but relevant contexts; and Demonstrate knowledge of an area or areas of specialisation and how that knowledge relates to other fields, disciplines or practices.

**Knowledge literacy:**

Demonstrate an understanding of different forms of knowledge, schools of thought and forms of explanation within the area of study or operation, and an awareness of knowledge production processes.

**Method and Procedure:**

Demonstrate an ability to evaluate, select and apply appropriate methods, procedures or techniques in processes of investigation or application within a defined context.

**Problem solving:**

Demonstrate an ability to identify, analyse and solve problems in unfamiliar contexts, gathering evidence and applying solutions based on evidence and procedures appropriate to the field, discipline or practice.

**Ethics and professional practice:**

Demonstrate an understanding of the ethical implications of decisions and actions, within an organisational or professional context, based on an awareness of the complexity of ethical dilemmas.

**Accessing, processing and managing information:**

Demonstrate an ability to evaluate different sources of information; to select information appropriate to the task, and to apply well-developed processes of analysis, synthesis and evaluation to that information.

**Producing and communicating information:**

Demonstrate an ability to present and communicate complex information reliably and coherently using appropriate academic and professional or occupational conventions, formats and technologies for a given context.

**Context and systems:**

Demonstrate an ability to make decisions and act appropriately in familiar and new contexts, demonstrating an understanding of the relationships between systems, and of how actions, ideas or developments in one system impact on other systems.

**Management of learning:**

Demonstrate an ability to evaluate performance against given criteria, and accurately identify and address his/her task-specific learning needs in a given context, and to provide support the learning needs of others where appropriate.

**Accountability:**

Demonstrate an ability to work effectively in a team or group, and to take responsibility for his/her decisions and actions and the decisions and actions of others within well-defined contexts, including the responsibility for the use of resources where appropriate.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ): <b>Develop and implement changes</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Optimisation</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ); <b>Improvements</b>
	Investigate and evaluate process options	To respond to changing external and internal needs	Operational performance and risks Bottlenecks, trends
	Collect, evaluate and build a case based on a variety of types of data or information, legal and ethical considerations	To implement improved technologies, revised systems	Departments or division
	Provide advice on systems, technology and methods	To bed down revised practices and systems	Technology, discipline and associated practices
	Implement projects or change processes	To optimise systems, processes and use of resources	



**LEVEL 5**

SAQA

**Scope of knowledge:**

Demonstrate an informed understanding of the core areas of one or more fields, disciplines or practices and an informed understanding of the key terms, concepts, facts, general principles, rules and theories of that field, discipline or practice.

**Knowledge literacy:**

Demonstrate an awareness of how knowledge (or a knowledge system) develops and evolves within the area of study or operation.

**Method and Procedure:**

Demonstrate an ability to select and apply standard methods, procedures or techniques within the field, discipline or practice, and to plan and manage an implementation process within a well defined, familiar and supported environment.

**Problem solving:**

Demonstrate an ability to identify, evaluate and solve defined, routine and new problems within a familiar context, and to apply solutions based on relevant evidence and procedures or other forms of explanation appropriate to the field, discipline or practice demonstrating an understanding of the consequences.

**Ethics and professional practice:**

Demonstrate an ability to take account of, and act in accordance with prescribed organisational and professional ethical codes of conduct, values and practices and to seek guidance on ethical and professional issues where necessary.

**Accessing, processing and managing information:**

Demonstrate an ability to gather information from a range of sources, including oral, written or symbolic texts, to select information appropriate to the task, and to apply basic processes of analysis, synthesis and evaluation on that information.

**Producing and communicating information:**

Demonstrate an ability to communicate information reliably, accurately and coherently, using conventions appropriate to the context, in written and oral or signed form or in practical demonstration, including an understanding of and respect for conventions around intellectual property, copyright and plagiarism including the associated legal implications.

**Context and systems:**

Demonstrate an ability to operate in a range of familiar and new contexts, demonstrating an understanding of different kinds of systems, their constituent parts and the relationships between these parts, and to understand how actions in one area impact on other areas within the same system.

**Management of learning:**

Demonstrate an ability to evaluate his/her performance or the performance of others and to take appropriate action where necessary; and  
Take responsibility for his/her learning within a structured learning process and to promote the learning of others.

**Accountability:**

Demonstrate an ability to account for his/her actions, to work effectively with and respect others, and, in a defined context, to take supervisory responsibility for others and for the responsible use of resources where appropriate.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ): <b>Maintain efficiencies</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Stability and consistency</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ) <b>Systems</b>
	Plan and implement processes and operations	To co-ordinate supply of resources	Operational system
	Lead and direct teams and progress	To ensure consistency of outputs	Staff
	Control and manage performance	To implement improved technology and techniques	Market requirements; client satisfaction
	Co-ordinate operations with other functions	To improve skill level, satisfaction; teams ethics	Environment
	Implement improvements		Allocated budget
			Ethics, good practices

**LEVEL 4**

SAQA

**Scope of knowledge:**

Demonstrate a fundamental knowledge base of the most important areas of one or more fields or disciplines, in addition to the fundamental areas of study and a fundamental understanding of the key terms, rules, concepts, established principles and theories in one or more fields or disciplines.

**Knowledge literacy:**

Demonstrate an understanding that knowledge in one field can be applied to related fields.

**Method and Procedure:**

Demonstrate an ability to apply essential methods, procedures and techniques of the field or discipline to a given familiar context and an ability to motivate a change using relevant evidence.

**Problem solving:**

Demonstrate an ability to use own knowledge to solve common problems within a familiar context and an ability to adjust an application of a common solution within relevant parameters to meet the needs of small changes in the problem or operating context with an understanding of the consequences of related actions.

**Ethics and professional practice:**

Demonstrate an ability to adhere to organisational ethics and a code of conduct and an ability to understand societal values and ethics.

**Accessing, processing and managing information:**

Demonstrate a basic ability in gathering relevant information, analysis and evaluation skills and an ability to apply and carry out actions by interpreting information from text and operational symbols or representations.

**Producing and communicating information:**

Demonstrate an ability to communicate and present information reliably and accurately in written and in oral or signed form.

**Context and systems:**

Demonstrate an understanding of the organisation or operating environment as a system within a wider context.

**Management of learning:**

Demonstrate a capacity to take responsibility for own learning within a supervised environment and a capacity to evaluate own performance against given criteria

**Accountability:**

Demonstrate a capacity to take decisions about and responsibility for actions and a capacity to take the initiative to address any shortcomings found.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ) <b>Setup processes and solve process problems</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Process management</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ): <b>Process data</b>
	Initiate activities	To troubleshoot	Workflow
	Interpret work instructions	To ensure smooth workflow, according to schedule, quality standards, safely	Client satisfaction
	Schedule	To comply with legal requirements	Work or service related data, cost
	Organise resources	To ensure efficient use of resources	
	Allocate work and resources to team	To ensure availability and reliability	
	Perform technical tasks	To lead and direct operations	Team
	Install, assemble, repair		
	Provide services	To identify and anticipate problems	Environmental conditions
	Attend to client needs		
	Ensure progress & completion	To apply technical judgement	

**LEVEL 3**

SAQA **Scope of knowledge:**  
 Demonstrate a basic understanding of the key concepts and knowledge of one or more fields or disciplines, in addition to the fundamental areas of study.

**Knowledge literacy:**  
 Demonstrate an understanding that knowledge in a field can only be applied if the knowledge as well as its relationship to other relevant information in related fields is understood.

**Method and Procedure:**  
 Demonstrate operational literacy, a capacity to operate within clearly defined contexts and an ability to work within a managed environment.

**Problem solving:**  
 Demonstrate an ability to use own knowledge to select appropriate procedures to solve problems within given parameters.

**Ethics and professional practice:**  
 Demonstrate an ability to comply with organisational ethics.

**Accessing, processing and managing information:**  
 Demonstrate a basic ability to summarise and interpret information relevant to the context from a range of sources and an ability to take a position on available information, discuss the issues and reach a resolution.

**Producing and communicating information:**  
 Produce a coherent presentation and report, providing explanations for positions taken.

**Context and systems:**  
 Demonstrate an understanding of the organisation or operating environment as a system and application of skills in measuring the environment using key instruments and equipment.

**Management of learning:**  
 Demonstrate an ability to learn within a managed environment.

**Accountability:**  
 Demonstrate capacity to actively contribute to team effectiveness.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ): <b>Adjust, maintain and oversee</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Procedures</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ) <b>Productivity</b>
	Plan work process	To complete tasks within required time	Quality
	Allocate tasks	To ensure procedures are applied consistently	
	Monitor progress of work	To ensure work standards are met	Delivery targets
	Use equipment and instruments	To ensure availability of equipment and instruments	Wastage
	Contribute to team efforts and objectives	To ensure team works effectively and efficiently	Safety

**LEVEL 2**

SAQA

**Scope of knowledge:**

Demonstrate a basic operational knowledge of one or more areas or fields of study, in addition to the fundamental areas of study.

**Knowledge literacy:**

Demonstrate an understanding that one's own knowledge of a particular field or system develops through active participation in relevant activities.

**Method and Procedure:**

Demonstrate an ability to use a variety of common tools and instruments and a capacity to work in a disciplined manner in a well-structured and supervised environment.

**Problem solving:**

Demonstrate an ability to use own knowledge to select and apply known solutions to well-defined routine problems.

**Ethics and professional practice:**

Demonstrate an ability to apply personal values and ethics in a specific environment.

**Accessing, processing and managing information:**

Demonstrate the ability to apply literacy and numeracy skills to a range of different but familiar contexts.

**Producing and communicating information:**

Demonstrate a basic ability to collect, organise and report information clearly and accurately and an ability to express an opinion on given information clearly in spoken/signed and written form.

**Context and systems:**

Demonstrate an understanding of the environment within which he/she operates in a wider context.

**Management of learning:**

Demonstrate a capacity to learn in a disciplined manner in a well-structured and supervised environment.

**Accountability:**

Demonstrate an ability to manage own time effectively and an ability to develop sound working relationships and an ability to work effectively as part of a group.

QCTO	<b>Typical activity</b> ( <i>predominant things a person will do</i> ): <b>Monitor, support</b>	<b>Role</b> ( <i>characteristics of the expected functions</i> ): <b>Operations</b>	<b>Workplace Focus</b> ( <i>things or people to interact or deal with</i> ) <b>Machinery</b>
	Perform repetitive work where some discretion is required	To support operations and processes	Equipment, machinery (semi-automatic, single purpose), instruments, materials
	Monitor quality of materials, information, process and outputs	To respond to deviations	Internal and external customers
	Record, organise and report readily available information	To maintain operations through minor adjustments	
	To work as a productive and active member of a team	To contribute to team outputs	Own and other teams
	Operate equipment and machinery	To apply operating procedures	Product or service
	Make simple settings and adjustments		
	Perform reception duties		
	Interpret work instructions	To confirm compliance with standards	Operating procedures and standards
	Perform repetitive work where some discretion is required	To support operations and processes	Equipment, machinery (semi-automatic, single purpose), instruments, materials
	Monitor quality of materials, information, process and outputs	To respond to deviations	Internal and external customers
	Record, organise and report readily available information	To maintain operations through minor adjustments	

**LEVEL 1**

SAQA	<p><b>Scope of knowledge:</b> Demonstrate a general knowledge of one or more areas or fields of study, in addition to the fundamental areas of study.</p> <p><b>Knowledge literacy:</b> Demonstrate an understanding that knowledge in a particular field develops over a period of time through the efforts of a number of people and often through the synthesis of information from a variety of related sources and fields.</p> <p><b>Method and Procedure:</b> Demonstrate an ability to use key common tools and instruments and a capacity to apply him/herself to a well-defined task under direct supervision.</p> <p><b>Problem solving:</b> Demonstrate an ability to recognise and solve problems within a familiar, well-defined context.</p> <p><b>Ethics and professional practice:</b> Demonstrate an ability to identify and develop own personal values and ethics and an ability to identify the ethics applicable in a specific environment.</p> <p><b>Accessing, processing and managing information:</b> Demonstrate an ability to recall, collect and organise given information clearly and accurately, sound listening and speaking (receptive and productive language use), reading and writing skills and basic numeracy skills including an understanding of symbolic systems.</p> <p><b>Producing and communicating information:</b> Demonstrate an ability to report information clearly and accurately in spoken/signed and written form.</p> <p><b>Context and systems:</b> Demonstrate an understanding of the context within which he/she operates.</p> <p><b>Management of learning:</b> Demonstrate an ability to sequence and schedule learning tasks and an ability to access and use a range of learning resources.</p> <p><b>Accountability:</b> Demonstrate an ability to work as part of a group.</p>		
QCTO	<p><b>Typical activity</b> (<i>predominant things a person will do</i>): <b>Perform elementary tasks</b></p> <p>Perform repetitive, manual tasks with little discretion</p> <p>Identify and remove waste</p> <p>Co-operate with fellow workers</p>	<p><b>Role</b> (<i>characteristics of the expected functions</i>): <b>Task</b></p> <p>To provide support</p> <p>To comply with rules</p>	<p><b>Workplace Focus</b> (<i>things or people to interact or deal with</i>): <b>Machines, tools</b></p> <p>Basic tools, materials, waste</p> <p>Standard forms</p>



## ANNEXURE C

Unit Group		Field	Subfield	Closest related CESM Group	
<b>1</b>	<b>Business Administration, Information Services, Human Resources and Teaching Related Occupations</b>				
<b>010</b>	<b>General and Business Administration Related Occupations</b>				
<b>1</b>					
111 1	Senior Government Officials	7	Public Policy, Politics and Democratic Citizenship	19	PUBLIC MANAGEMENT AND SERVICES
111 2	Traditional Chiefs and Heads of Villages	7	Public Policy, Politics and Democratic Citizenship	1902	Community Organisation and Advocacy
111 4	Senior Officials of Special-interest Organisations	7	Public Policy, Politics and Democratic Citizenship	1902	Community Organisation and Advocacy
112 1	Managing Directors and Chief Executives	3	Generic Management	0401	Business Administration, Management and Operations
121 9	Business Services and Administration Managers not Elsewhere Classified	3	Generic Management	0401	Business Administration, Management and Operations
143 1	Sports, Recreation and Cultural Centre Managers	2	Cultural Studies /Sport	0417	Parks, Recreation and Leisure Facilities Management
242 1	Management and Organization Analysts		Human Resources	0401	Business Administration, Management and Operations
334 1	Office Supervisors	3	Office Administration	0401	Business Administration, Management and Operations
334 3	Administrative and Executive Secretaries	3	Office Administration	0401	Business Administration, Management and Operations
334 4	Medical Secretaries	3	Office Administration	0401	Business Administration, Management and Operations
411 1	General Office Clerks	3	Office Administration	0401	Business Administration, Management and Operations

<b>Unit Group</b>		<b>Field</b>	<b>Subfield</b>	<b>Closest related CESM Group</b>	
412 1	Secretaries (General)	3	Office Administration	0401	Business Administration, Management and Operations
421 2	Bookmakers, Croupiers and Related Gaming Workers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0401	Business Administration, Management and Operations
422 2	Contact Centre Information Clerks	3	Marketing	0401	Business Administration, Management and Operations
422 3	Telephone Switchboard Operators	11	Cusomer Services	0401	Business Administration, Management and Operations
422 5	Enquiry Clerks	11	Cusomer Services	0401	Business Administration, Management and Operations
422 6	Receptionists (General)	11	Cusomer Services	0401	Business Administration, Management and Operations
432 2	Production Clerks			0401	Business Administration, Management and Operations
441 2	Mail Carriers and Sorting Clerks	3	Office Administration	0401	Business Administration, Management and Operations
441 4	Scribes and Related Workers	4	Language	0401	Business Administration, Management and Operations
441 5	Filing and Copying Clerks	3	Office Administration	0401	Business Administration, Management and Operations
441 9	Clerical Support Workers not Elsewhere Classified	3	Office Administration	0401	Business Administration, Management and Operations

Unit Group	Field	Subfield	Closest related CESM Group		
<b>010 2</b>	<b>Occupational Field: Information Related Occupations</b>				
262 1	Archivists and Curators	2	Cultural Studies	2005	Museology/Museum Studies
262 1	Archivists and Curators	2	Cultural Studies	2005	Library Science/Librarianship
262 2	Librarians and Related Information Professionals	4	Communication Studies	0610 / 2004	Management Information Systems and Services <b>or</b> Library Science/Librarianship
343 3	Gallery, Museum and Library Technicians	4	Communication Studies	2004 / 2005	Library Science/Librarianship <b>or</b> Museology/Museum Studies
441 1	Library Clerks	4	Communication Studies	2004	Library Science/Librarianship
<b>010 3</b>	<b>Occupational Field: Human Resources Related Occupations</b>				
121 2	Human Resource Managers	3	Human Resources	0408	Human Resource Management and Services
333 3	Employment Agents and Contractors	3	Human Resources	0408	Human Resource Management and Services
441 6	Personnel Clerks	3	Human Resources	0408	Human Resource Management and Services
242 4	Training and Staff Development Professionals	5	Adult Learning	0408 / 1814	Human Resource Management and Services <b>or</b> Industrial and Organisational Psychology
242 3	Personnel and Careers Professionals			1814	Industrial and Organisational Psychology

Unit Group	Field	Subfield	Closest related CESM Group		
<b>0104</b>	<b>Occupational Field: Occupational Field: Teaching Related Occupations</b>				
1345	Education Managers	5	Higher Education and Training	0703	Educational Management and Leadership
2311	University and Higher Education Teachers	5	Higher Education and Training	0701	Education, General
2321	Vocational or Further Education Teachers	5	Schooling	0712	Teacher Education and Professional Development, Specific Subject Areas, Further Education and Training (FET)
2331	Secondary or Intermediate and Senior Education Teachers	5	Schooling	0710	Teaching Education and Professional Development, Specific Levels and Methods
2341	Primary School or Foundational Phase Teachers	5	Schooling	0711	Teacher Education and Professional Development, Specific Subject Areas, Early Childhood Development (ECD) and General Education and Training (GET)
2342	Early Childhood Educators	5	Early Childhood Development	0711	Teacher Education and Professional Development, Specific Subject Areas, Early Childhood Development (ECD) and General Education and Training (GET)
2351	Education Methods Specialists	5	Schooling	0701/2/4	Education, General /Curriculum and Instruction /Educational/Instructional Media Design
2352	Special Needs Teachers	5	Schooling	0708	Special Needs Education
2353	Other Language Teachers	5	Schooling	0701	Education, General
2354	Other Music Teachers	5	Schooling	0701	Education, General

Unit Group		Field	Subfield	Closest related CESM Group	
2355	Other Arts Teachers	5	Schooling	0701	Education, General
2359	Teaching Professionals not Elsewhere Classified	5	Schooling	07	EDUCATION
5311	Child Care Workers	5	Early Childhood Development	0710	Teaching Education and Professional Development, Specific Levels and Methods
5312	Teachers' Aides	5	Early Childhood Development	0710	Teaching Education and Professional Development, Specific Levels and Methods
<b>2</b>	<b>Finance, Insurance, Sales, Marketing, Retail and Logistics Related Occupations</b>				
<b>0201</b>	<b>Occupational Field: Accounting Related Occupations</b>				
2411	Accountants	3	Finance, Economics and Accounting	0402/0413	Accounting and Related Services / Taxation
3313	Accounting Associate Professionals	3	Finance, Economics and Accounting	0402	Accounting and Related Services
4311	Accounting and Bookkeeping Clerks	3	Finance, Economics and Accounting	0402/0413	Accounting and Related Services / Taxation
<b>0202</b>	<b>Occupational Field: Financial, Investment, Asset and Insurance Related Occupations</b>				
1211	Finance Managers	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services
1346	Financial and Insurance Services Branch Managers	3	Finance, Economics and Accounting	04060414	Finance and Financial Management Services / Insurance
2121	Mathematicians, Actuaries and Statisticians	10	Mathematical Sciences	0410/1501/1503	Management Sciences and Quantitative Methods /Mathematics/ Statistics
2412	Financial and Investment Advisors	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services
<b>Unit Group</b>		<b>Field</b>	<b>Subfield</b>	<b>Closest related CESM Group</b>	
2413	Financial Analysts	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services

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2422	Policy Administration Professionals	7	Public Policy, Politics and Democratic Citizenship	0410	Management Sciences and Quantitative Methods
2631	Economists	7	General Social Science	0404	Economics
3311	Securities and Finance Dealers and Brokers	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services
3312	Credit and Loans Officers	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services
3314	Statistical, Mathematical and Related Associate Professionals	10	Mathematical Sciences	15	MATHEMATICS AND STATISTICS
3315	Valuers and Loss Assessors	3	Finance, Economics and Accounting	0410 /0414	Management Sciences and Quantitative Methods / Insurance
3321	Insurance Representatives	3	Finance, Economics and Accounting	0414	Insurance
3324	Trade Brokers	3	Finance, Economics and Accounting	0406/0416	Finance and Financial Management Services / Specialised Sales, Merchandising and Marketing Operations
4211	Bank Tellers and Related Clerks	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services
4213	Pawnbrokers and Money-lenders	3	Finance, Economics and Accounting	0406	Finance and Financial Management Services
4312	Statistical, Finance and Insurance Clerks	3	Finance, Economics and Accounting	0406/0414/1503	Finance and Financial Management Services / Insurance / Statistics
4313	Payroll Clerks	3	Finance, Economics and Accounting	0402	Accounting and Related Services

Unit Group		Field	Subfield	Closest related CESM Group	
5231	Cashiers and Ticket Clerks	3	Finance, Economics and Accounting	0402	Accounting and Related Services
<b>0203</b>	<b>Occupational Field: Retail and Logistics, and Sales and Marketing Related Occupations</b>				
1221	Sales and Marketing Managers	3	Marketing	0411	Marketing
1223	Research and Development Managers	3	Marketing	0411	Marketing
1324	Supply, Distribution and Related Managers	3	Marketing	0415	General Sales, Merchandising and Related Marketing Operations
1421	Retail and Wholesale Trade Managers	11	Wholesale and Retail	0415	General Sales, Merchandising and Related Marketing Operations
2433	Technical and Medical Sales Professionals (Excluding ICT)	3	Marketing	0416	Specialised Sales, Merchandising and Marketing Operations
2434	Information and Communications Technology Sales Professionals	3	Marketing	0416	Specialised Sales, Merchandising and Marketing Operations
3322	Commercial Sales Representatives	3	Marketing	0416	Specialised Sales, Merchandising and Marketing Operations
3323	Buyers	11	Wholesale and Retail	0415	General Sales, Merchandising and Related Marketing Operations
3331	Clearing and Forwarding Agents	11	Transport Operations and Logistics	0415	General Sales, Merchandising and Related Marketing Operations
3334	Real Estate Agents and Property Managers	3	Marketing	0412	Real Estate
4227	Survey and Market Research Interviewers	3	Marketing	0411	Marketing
4321	Stock Clerks	11	Transport Operations and Logistics	0415	General Sales, Merchandising and Related Marketing Operations

<b>Unit Group</b>		<b>Field</b>	<b>Subfield</b>	<b>Closest related CESM Group</b>	
4323	Transport Clerks	11	Transport Operations and Logistics	0415	General Sales, Merchandising and Related Marketing Operations
5112	Transport Conductors	11	Transport Operations and Logistics	0401	Business Administration, Management and Operations
5211	Stall and Market Salespersons	3	Marketing	0416	Specialised Sales, Merchandising and Marketing Operations
5212	Street Food Salespersons	3	Marketing	0416	Specialised Sales, Merchandising and Marketing Operations
5221	Shop Keepers	11	Wholesale and Retail	0405	Entrepreneurial and Small Business Operations
5222	Shop Supervisors	11	Wholesale and Retail	0405	Entrepreneurial and Small Business Operations
5223	Shop Sales Assistants	3	Marketing	0415	General Sales, Merchandising and Related Marketing Operations
5243	Door-to-door Salesperson	3	Marketing	0415	General Sales, Merchandising and Related Marketing Operations
5244	Contact Centre Salespersons	3	Marketing	0415	General Sales, Merchandising and Related Marketing Operations
5245	Service Station Attendants	11	Consumer Services	0415	General Sales, Merchandising and Related Marketing Operations
5246	Food Service Counter Attendants	11	Consumer Services	0416	Specialised Sales, Merchandising and Marketing Operations
5249	Sales Workers not Elsewhere Classified	3	Marketing	0416	Specialised Sales, Merchandising and Marketing Operations
8321	Hand Packers	11	Wholesale and Retail	0401	Business Administration, Management and Operations
8333	Freight Handlers	11	Transport Operations and Logistics	0401	Business Administration, Management and Operations

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Unit Group		Field	Subfield	Closest related CESM Group	
8334	Shelf Fillers	11	Wholesale and Retail	0401	Business Administration, Management and Operations
8511	Street and Related Service Workers			0415	General Sales, Merchandising and Related Marketing Operations
8521	Street Vendors	3	Marketing	0405	Entrepreneurial and Small Business Operations
<b>0204</b>	<b>Occupational Field: Advertising and Media Related Occupations</b>				
2642	Journalists	1	Communication Studies	0502	Journalism
1222	Advertising and Public Relations Managers	3	Marketing	0504	Public Relations, Advertising and Applied Communication
2431	Advertising and Marketing Professionals	3	Marketing	0504	Public Relations, Advertising and Applied Communication
2431	Advertising and Marketing Professionals	3	Marketing	0411	Marketing
2432	Public Relations Professionals	3	Marketing	0504	Public Relations, Advertising and Applied Communication
2641	Authors and Related Writers	4	Language	11	LANGUAGES, LINGUISTICS AND LITERATURE
2643	Translators, Interpreters and Other Linguists	4	Language	1101	Linguistic, Comparative and Related Language Studies and Practices
4413	Coding, Proof-reading and Related Clerks	4	Communication Studies	0505	Publishing

Unit Group	Field	Subfield	Closest related CESM Group		
<b>3</b>	<b>Travel, Accommodation, Food Preparation and Cleaning Services Related Occupations</b>				
<b>0301</b>	<b>Occupational Field: Food Preparation Related Occupations</b>				
3434	Chefs	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
5121	Cooks	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
6811	Butchers, Fishmongers and Related Food Preparers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
6812	Bakers, Pastry-cooks and Confectionery Makers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
6813	Dairy Products Makers	6	Manufacturing and Assembly	0107	Food Science and Technology
6814	Fruit, Vegetable and Related Preservers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
6815	Food and Beverage Tasters and Graders	11	Consumer Services	0107	Food Science and Technology
6815	Food and Beverage Tasters and Graders	11	Consumer Services	0107	Food Science and Technology
8411	Fast Food Preparers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
8412	Kitchen Helpers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0107	Food Science and Technology
<b>0302</b>	<b>Occupational Field: Travel, Event and Accommodation Related Occupations</b>				
1411	Hotel Managers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
1412	Restaurant Managers	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
3332	Conference and Event Planners	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management

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Unit Group		Field	Subfield	Closest related CESM Group	
4221	Travel Consultants and Clerks	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
4224	Hotel Receptionists	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
5111	Travel Attendants and Travel Stewards	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
5113	Travel Guides	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
5131	Waiters	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
5132	Bartenders	11	Hospitality, Tourism, Travel, Gaming and Leisure	0407	Hospitality Administration/Management
8621	Messengers, Package Deliverers and Luggage Porters	11	Consumer Services	0407	Hospitality Administration/Management
<b>0303</b>	<b>Occupational Field: Cleaning Related Occupations</b>				
5151	Cleaning and Housekeeping Supervisors	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
5152	Domestic Housekeepers	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
6433	Building Structure Cleaners	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
7157	Laundry Machine Operators	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8111	Domestic Cleaners and Helpers	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8112	Cleaners and Helpers in Offices, Hotels and Other Establishments	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health

Unit Group		Field	Subfield	Closest related CESM Group	
8121	Hand Launderers and Pressers	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8122	Vehicle Cleaners	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8123	Window Cleaners	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8129	Other Cleaning Workers	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8611	Garbage and Recycling Collectors	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8612	Refuse Sorters	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
8613	Sweepers and Related Labourers	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
<b>4</b>	<b>Farming, Forestry, Nature Conservation, Environment and Related Science Related Occupations</b>				
<b>0401</b>	<b>Occupational Field: Environmental and Environmental Sciences Related Occupations</b>				
2111	Physicists and Astronomers	10	Physical Sciences	1402	Astronomy and Astrophysics
2111	Physicists and Astronomers	10	Physical Sciences	1407	Physics
2112	Meteorologists	10	Physical Sciences	1403	Atmospheric Sciences and Meteorology
2113	Chemists	10	Physical Sciences	1404	Chemistry
2114	Geologists and Geophysicists	10	Physical Sciences	1406	Geology and Earth Sciences/Geosciences

Unit Group		Field	Subfield	Closest related CESM Group	
2131	Biologists, Botanists, Zoologists and Related Professionals	10	Life Sciences	13	LIFE SCIENCES
2133	Environmental Protection Professionals	1	Nature Conservation	1405	Geography and Cartography
2143	Environmental Engineers	10	Life Sciences	0813	Environmental/Environmental Health Engineering
2263	Environmental and Occupational Health and Hygiene Professionals	9	Preventative Health	0813	Environmental/Environmental Health Engineering
2263	Environmental and Occupational Health and Hygiene Professionals	9	Preventative Health	0913	Public Health
3132	Incinerator and Water Treatment Plant Operators	10	Life Sciences	1312	Ecology, Evolution, Systematics and Population Biology
3141	Life Science Technicians (Excluding Medical)	10	Life Sciences	13	LIFE SCIENCES
3257	Environmental and Occupational Health Inspectors and Associates	9	Preventative Health	0813	Environmental/Environmental Health Engineering
3257	Environmental and Occupational Health Inspectors and Associates	9	Preventative Health	0913	Public Health
5411	Fire Fighters	11	Cleaning, Domestic, Hiring, Property and Rescue Services	0913	Public Health
6844	Fumigators and Other Pest and Weed Controllers	1	Secondary Agriculture	1309	Pharmacology and Toxicology
8624	Water and Firewood Collectors	1	Nature Conservation	1312	Ecology, Evolution, Systematics and Population Biology

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Unit Group	Field	Subfield	Closest related CESM Group		
<b>0402</b>	<b>Occupational Field: Plant, Crop, Nursery and Forestry Production Related Occupations</b>				
1311	Agricultural and Forestry Production Managers	1	Primary Agriculture / Forestry and Wood Technology	0101/ 0103	Agricultural Business and Management / Agricultural Production Operations
1311	Agricultural and Forestry Production Managers	1	Primary Agriculture / Forestry and Wood Technology	0827	Forest Engineering
3143	Forestry Technicians	1	Forestry and Wood Technology	0110	Forestry and Wood Sciences
6111	Field Crop and Vegetable Growers	1	Primary Agriculture	0104	Applied Horticulture and Horticultural Business Services
6112	Tree and Shrub Crop Growers	1	Primary Agriculture	0104	Applied Horticulture and Horticultural Business Services
6113	Gardeners, Ornamental Horticultural and Nursery Growers	1	Primary Agriculture / Horticulture	0104	Applied Horticulture and Horticultural Business Services
6114	Mixed Crop Growers	1	Primary Agriculture	0104	Applied Horticulture and Horticultural Business Services
6211	Forestry and Related Workers	1	Primary Agriculture	0110	Forestry and Wood Sciences
6311	Subsistence Crop Farmers	1	Primary Agriculture	0104	Applied Horticulture and Horticultural Business Services
6821	Wood Treaters	1	Forestry and Wood Technology	0110	Forestry and Wood Sciences
8211	Crop Farm Workers	1	Primary Agriculture	0103	Agricultural Production Operations
8214	Garden and Horticultural Labourers	1	Horticulture	0103	Agricultural Production Operations

Unit Group		Field	Subfield	Closest related CESM Group	
8215	Forestry Labourers	1	Forestry and Wood Technology	0110	Forestry and Wood Sciences
<b>0403</b>	<b>Occupational Field: Animal and Livestock Related Occupations</b>				
1312	Aquaculture and Fisheries Production Managers	1	Primary Agriculture	0101/0103	Agricultural Business and Management / Agricultural Production Operations
2251	Veterinarians	9	Preventative Health	0915/0916	Veterinary Medicine / Veterinary Biomedical and Clinical Sciences ?
3241	Veterinary Technicians and Assistants	9	Preventative Health	0915	Veterinary Medicine
5164	Pet Groomers and Animal Care Workers	9	Preventative Health	1306	Zoology/Animal Biology
6121	Livestock and Dairy Producers	1	Primary Agriculture	0106	Animal Sciences
6122	Poultry Producers	1	Primary Agriculture	0106	Animal Sciences
6123	Apiarists and Sericulturists	1	Primary Agriculture	1306	Zoology/Animal Biology
6129	Other Animal Producers not Elsewhere Classified	1	Primary Agriculture	0106	Animal Sciences
6221	Skilled Aquaculture Workers	1	Primary Agriculture	0103	Agricultural Production Operations
6222	Skilled Inland and Coastal Waters Fishery Workers	1	Primary Agriculture	0103	Agricultural Production Operations
6223	Skilled Deep-sea Fishery Workers	1	Primary Agriculture	0103	Agricultural Production Operations
6224	Hunters and Trappers	1	Primary Agriculture	0106	Animal Sciences
6312	Subsistence Livestock Farmer	1	Primary Agriculture	0106	Animal Sciences
8212	Livestock Farm Labourers	1	Primary Agriculture	0103	Agricultural Production Operations
8216	Fishery and Aquaculture Labourers	1	Primary Agriculture	0103	Agricultural Production Operations

Unit Group	Field	Subfield	Closest related CESM Group		
<b>0404</b>	<b>Mixed Livestock and Crop Farming Related Occupations</b>				
2132	Farming, Forestry and Fisheries Advisers	1	Primary Agriculture	0101	Agricultural Business and Management
3142	Agricultural Technicians	1	Primary Agriculture	0101	Agricultural Business and Management
6131	Mixed Crop and Animal Producers	1	Primary Agriculture	0103	Agricultural Production Operations
6313	Subsistence Mixed Crop and Livestock Farmers	1	Primary Agriculture	0103	Agricultural Production Operations
6314	Subsistence Fishers, Hunters, Trappers and Gatherers	1	Primary Agriculture	0103	Agricultural Production Operations
8213	Mixed Crop and Livestock Farm Labourers	1	Primary Agriculture	0103	Agricultural Production Operations
<b>5</b>	<b>Medical, Social, Welfare, Sports and Personal Care Related Occupations</b>				
<b>0501</b>	<b>Medical Practices and Research Related Occupations</b>				
2211	Generalist Medical Practitioners	9	Promotive Health and Developmental Services	0906	Medicine
2212	Specialist Medical Practitioners	9	Promotive Health and Developmental Services	0907	Medical Clinical Sciences
2212	Specialist Medical Practitioners	9	Promotive Health and Developmental Services	0924	Medical Radiologic Technology/Science (Radiography)
2241	Paramedical Practitioners	9	Promotive Health and Developmental Services	0906	Medicine
3212	Medical and Pathology Laboratory Technicians	9	Promotive Health and Developmental Services	0907	Medical Clinical Sciences
3256	Medical Assistants	9	Promotive Health and Developmental Services	0907	Medical Clinical Sciences
3258	Ambulance Workers	9	Promotive Health and Developmental Services	0907	Medical Clinical Sciences



Unit Group	Field	Subfield	Closest related CESM Group		
<b>0502</b>	<b>Occupational Field: Dentistry and Optometry Related Occupations</b>				
2261	Dentists	9	Curative Health	0903	Dentistry, Advanced Dentistry and Oral Sciences
2267	Optometrists and Ophthalmic Opticians	9	Promotive Health and Developmental Services	0909	Optometry
3251	Dental Assistants and Therapists	9	Curative Health	0904	Dental Support Services and Allied Professions
3254	Dispensing Opticians	9	Promotive Health and Developmental Services	0909	Optometry
<b>0503</b>	<b>Occupational Field: Midwifery, Nursing and Medical Support Related Occupations</b>				
2221	Nursing Professionals	9	Curative Health	0908	Nursing
2222	Midwifery Professionals	9	Curative Health	0908	Nursing
3221	Nursing Associate Professionals	9	Curative Health	0908	Nursing
3222	Midwifery Associate Professionals	9	Promotive Health and Developmental Services	0908	Nursing
3253	Community Health Workers	9	Promotive Health and Developmental Services	0913	Public Health
5321	Health Care Assistants	9	Promotive Health and Developmental Services	0913	Public Health
5322	Home-based Personal Care Workers	9	Promotive Health and Developmental Services	0913	Public Health

Unit Group	Field	Subfield	Closest related CESM Group		
<b>0504</b>	<b>Occupational Field: Health Therapy and Medical Technical Related Occupations</b>				
2231	Traditional and Complementary Medicine Professionals	9	Promotive Health and Developmental Services	0920	Alternative and Complementary Medicine and Medical Systems
2264	Physiotherapists	9	Rehabilitative Health/Services	0914	Rehabilitation and Therapeutic Professions
2266	Audiologists and Speech Therapists	9	Rehabilitative Health/Services	0902	Communications Disorders Sciences and Services
3211	Medical Imaging and Therapeutic Equipment Technicians	9	Preventative Health	0914/0924	Rehabilitation and Therapeutic Professions / Medical Radiologic Technology/Science (Radiography)
3214	Medical and Dental Prosthetic Technicians	9	Rehabilitative Health/Services	0904	Dental Support Services and Allied Professions
3214	Medical and Dental Prosthetic Technicians	9	Rehabilitative Health/Services	0914	Rehabilitation and Therapeutic Professions
3231	Traditional and Complementary Medicine Associate Professionals	9	Rehabilitative Health/Services	0920	Alternative and Complementary Medicine and Medical Systems
3255	Physiotherapy Technicians and Assistants	9	Rehabilitative Health/Services	0914	Rehabilitation and Therapeutic Professions
3423	Fitness and Recreation Instructors and Program Leaders	9	Rehabilitative Health/Services	0914	Rehabilitation and Therapeutic Professions

Unit Group	Field	Subfield	Closest related CESM Group		
<b>0505</b>	<b>Occupational Field: Dietary and Pharmaceutical Related Occupations</b>				
2262	Pharmacists	9	Curative Health	0911	Pharmacy, Pharmaceutical Sciences and Administration
2265	Dieticians and Nutritionists	9	Curative Health	0918	Dietetics and Clinical Nutrition Services
3213	Pharmaceutical Technicians and Assistants	9	Curative Health	0911	Pharmacy, Pharmaceutical Sciences and Administration
<b>0506</b>	<b>Occupational Field: Social, Social Sciences, Welfare and Medical Services Related Occupations</b>				
1341	Child Care Service Managers	9	Promotive Health and Developmental Services	1005 /2008	Human Development, Family Studies and Related Services /Social Work
1342	Health Service Managers	9	Promotive Health and Developmental Services	0905	Health and Medical Administrative Services
1343	Aged Care Service Managers	9	Promotive Health and Developmental Services	0905 /1005	Health and Medical Administrative Services / Human Development, Family Studies and Related Services
1344	Social Welfare Managers	9	Promotive Health and Developmental Services	1005/2008	Human Development, Family Studies and Related Services / Social Work
2632	Sociologists, Anthropologists and Related Professionals	7	General Social Science	2001/2007/1701/2003	Anthropology / Sociology /Philosophy /History
2633	Philosophers, Historians and Political Scientists	7	General Social Science	2006	Political Science and Government
2634	Psychologists	7	General Social Science	18	PSYCHOLOGY
2635	Social Work and Counselling Professionals	7	General Social Science	1806/2008	Counselling Psychology / Social Work
2636	Religious Professionals	7	General Social Science	1702	Religion
2636	Religious Professionals	7	General Social Science	1703	Theology

Unit Group		Field	Subfield	Closest related CESM Group	
3252	Medical Records and Health Information Technicians	9	Promotive Health and Developmental Services	0905	Health and Medical Administrative Services
3412	Social Work Associate Professionals	7	General Social Science	2008/ 2008	Social Work / Human Development, Family Studies and Related Services
3413	Religious Associate Professionals	7	General Social Science	1702/ 1703	Religion / Theology
<b>0507</b>	<b>Occupational Field: Personal Care, Sport, Beauty and Funeral Related Occupations</b>				
3421	Athletes and Sports Players	2	Sport	1308	Physiology, Pathology and Related Sciences
3422	Sports Coaches, Instructors and Officials	2	Sport	1308	Physiology, Pathology and Related Sciences
5141	Hairdressers	11	Personal care	0911	Pharmacy, Pharmaceutical Sciences and Administration
5142	Beauticians and Related Workers	11	Personal care	0999	Health Professions and Related Clinical Sciences, Other
5162	Companions and Valets	11	Personal care	0999	Health Professions and Related Clinical Sciences, Other
5163	Undertakers and Embalmers	11	Personal care	0999	Health Professions and Related Clinical Sciences, Other
6841	Underwater Divers	2	Sport	1308	Physiology, Pathology and Related Sciences
<b>6</b>	<b>Security and Law Related Occupations</b>				
<b>0601</b>	<b>Occupational Field: Security and Defence Related Occupations</b>				
1347	Armed Forces Managers	8	Sovereignty of the State	16	MILITARY SCIENCES
3355	Police Inspectors and Detectives	8	Safety in Society	1905	Criminal Justice and Corrections
5412	Police Officers	8	Safety in Society	1905	Criminal Justice and Corrections
5413	Prison Guards	8	Safety in Society	1905	Criminal Justice and Corrections

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Unit Group		Field	Subfield	Closest related CESM Group	
5414	Security Guards	8	Safety in Society	1905	Criminal Justice and Corrections
5415	Intelligence Operators	8	Sovereignty of the State	2006	Political Science and Government
5421	Seaward Defence Members	8	Sovereignty of the State	1999	Public Management and Services, Other
5422	Special Forces Defence Members	8	Sovereignty of the State	1999	Public Management and Services, Other
5423	Landward Defence Members	8	Sovereignty of the State	1999	Public Management and Services, Other
5424	Defence Support Members	8	Sovereignty of the State	1999	Public Management and Services, Other
5425	Airward Defence Members	8	Sovereignty of the State	1999	Public Management and Services, Other
<b>0602</b>	<b>Occupational Field: Law Related Occupations</b>				
1111	Legislators	7	Public Policy, Politics and Democratic Citizenship	1207	Legal Profession
1213	Policy and Planning Managers	7	Public Policy, Politics and Democratic Citizenship	1207	Legal Profession
2611	Lawyers	8	Justice in Society	12	LAW
2612	Judges	8	Justice in Society	12	LAW
2619	Legal Professionals not Elsewhere Classified	8	Justice in Society	12	LAW
3342	Legal Secretaries	8	Justice in Society	1207	Legal Profession
3351	Customs and Border Inspectors	11	Transport Operations and Logistics	1999	Public Management and Services, Other
3352	Government Tax and Excise Officials	7	Public Policy, Politics and Democratic Citizenship	1999	Public Management and Services, Other
3353	Government Social Benefits Officials	7	Public Policy, Politics and Democratic Citizenship	1999	Public Management and Services, Other
3354	Government Licensing Officials	7	Public Policy, Politics and Democratic Citizenship	1999	Public Management and Services, Other
3411	Legal and Related Associate Professionals	8	Justice in Society	12	LAW

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Unit Group		Field	Subfield	Closest related CESM Group	
4214	Debt-collectors and Related Workers	8	Justice in Society	1905	Criminal Justice and Corrections
<b>7</b>	<b>Arts, Design, Installation, Maintenance, Construction and ICT Related Occupations</b>				
<b>0701</b>	<b>Occupational Field: ICT Related Occupations</b>				
1331	Information and Communications Technology Service Managers	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2356	Information Technology Trainers	10	Information Technology and Computer Sciences	0601	Computer and Information Sciences
2511	Systems Analysts	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2512	Software Developers	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2513	Web and Multimedia Developers	2	Visual Arts	06	COMPUTER AND INFORMATION SCIENCES
2514	Applications Programmers	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2519	Software and Applications Developers and Analysts not Elsewhere Classified	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2521	Database Designers and Administrators	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2522	Systems Administrators	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
2523	Computer Network Professionals	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES

Unit Group		Field	Subfield	Closest related CESM Group	
2529	Database and Network Professionals not Elsewhere Classified	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
3511	Information and Communications Technology Operations Technicians	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
3512	Information and Communications Technology User Support Technicians	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
3513	Computer Network and Systems Technicians	10	Information Technology and Computer Sciences	06	COMPUTER AND INFORMATION SCIENCES
3514	Web Technicians	2	Visual Arts	06	COMPUTER AND INFORMATION SCIENCES
4131	Typists and Word Processing Operators	10	Information Technology and Computer Sciences	0605	Data Entry/Microcomputer Applications
4132	Data Entry Clerks	10	Information Technology and Computer Sciences	0605	Data Entry/Microcomputer Applications
<b>0702</b>	<b>Occupational Field: Electrical, Electromechanical, Electronic, Instrumentation and Telecommunications Related Occupations</b>				
2151	Electrical Engineers	6	Engineering and Related Design	0809	Electrical, Electronics and Communications Engineering
2152	Electronics Engineers	6	Engineering and Related Design	0809	Electrical, Electronics and Communications Engineering
2153	Telecommunications Engineers	6	Engineering and Related Design	0809	Electrical, Electronics and Communications Engineering
3113	Electrical Engineering Technicians	6	Engineering and Related Design	0809	Electrical, Electronics and Communications Engineering

Unit Group		Field	Subfield	Closest related CESM Group	
3114	Electronics Engineering Technicians	6	Engineering and Related Design	0809	Electrical, Electronics and Communications Engineering
3131	Power Production Plant Operators	12	Electrical Infrastructure Construction	0809	Electrical, Electronics and Communications Engineering
3131	Power Production Plant Operators	12	Electrical Infrastructure Construction	0819	Nuclear Engineering
3521	Broadcasting and Audio-visual Technicians	6	Manufacturing and Assembly	0809	Electrical, Electronics and Communications Engineering
3522	Telecommunications Engineering Technicians	6	Engineering and Related Design	0809	Electrical, Electronics and Communications Engineering
6427	Air Conditioning and Refrigeration Mechanics	12	Physical Planning Design and Management	0809	Electrical, Electronics and Communications Engineering
6711	Building and Related Electricians	12	Electrical Infrastructure Construction	0809	Electrical, Electronics and Communications Engineering
6712	Electrical Mechanics and Fitters	6	Manufacturing and Assembly	0809	Electrical, Electronics and Communications Engineering
6713	Electrical Line Installers and Repairers	12	Electrical Infrastructure Construction	0809	Electrical, Electronics and Communications Engineering
6721	Electronics Mechanics and Servicers	6	Manufacturing and Assembly	0809	Electrical, Electronics and Communications Engineering
6722	Information and Communications Technology Installers and Servicers and Related Occupations	6	Manufacturing and Assembly	0809	Electrical, Electronics and Communications Engineering
7212	Electrical and Electronic Equipment Assemblers	6	Manufacturing and Assembly	0809	Electrical, Electronics and Communications Engineering
8623	Meter Readers and Vending-machine Collectors	6	Manufacturing and Assembly	0809	Electrical, Electronics and Communications Engineering

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Unit Group	Field	Subfield	Closest related CESM Group		
<b>0703</b>	<b>Occupational Field: Mechanical Related Occupations</b>				
2144	Mechanical Engineers	6	Engineering and Related Design	0815	Mechanical and Mechatronic Engineering
3115	Mechanical Engineering Technicians	6	Engineering and Related Design	0815	Mechanical and Mechatronic Engineering
6523	Metal Working Machine Tool Setters and Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
6531	Motor Vehicle Mechanics and Repairers	6	Manufacturing and Assembly	0810	Engineering Mechanics
6532	Aircraft Engine Mechanics and Repairers	6	Manufacturing and Assembly	0810	Engineering Mechanics
6533	Agricultural and Industrial Machinery Mechanics and Repairers	6	Manufacturing and Assembly	0810	Engineering Mechanics
6534	Bicycle and Related Repairers	6	Manufacturing and Assembly	0810	Engineering Mechanics
6823	Woodworking Machine Tool Setters and Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7112	Mineral and Stone Processing Plant Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7114	Cement, Stone and Other Mineral Products Machine Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7121	Metal Processing Plant Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7122	Metal Finishing, Plating and Coating Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7131	Chemical Products Plant and Machine Operators	6	Fabrication and Extraction	0810	Engineering Mechanics

<b>Unit Group</b>		<b>Field</b>	<b>Subfield</b>	<b>Closest related CESM Group</b>	
7132	Photographic Products Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7141	Rubber Products Machine Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7142	Plastic Products Machine Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7143	Paper Products Machine Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7151	Fibre Preparing, Spinning and Winding Machine Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7152	Weaving and Knitting Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7153	Sewing Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7154	Bleaching, Dyeing and Fabric Cleaning Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7155	Fur and Leather Preparing Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7156	Shoemaking and Related Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7159	Textile, Fur and Leather Products Machine Operators not Elsewhere Classified	6	Manufacturing and Assembly	0810	Engineering Mechanics
7161	Food and Related Products Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7171	Pulp and Papermaking Plant Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7172	Wood Processing Plant Operators	6	Fabrication and Extraction	0810	Engineering Mechanics

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Unit Group		Field	Subfield	Closest related CESM Group	
7181	Glass and Ceramics Plant Operators	6	Fabrication and Extraction	0810	Engineering Mechanics
7182	Steam Engine and Boiler Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7183	Packing, Bottling and Labelling Machine Operators	6	Manufacturing and Assembly	0810	Engineering Mechanics
7211	Mechanical Machinery Assemblers	6	Manufacturing and Assembly	0810	Engineering Mechanics
7312	Railway Brake, Signal and Switch Operators	11	Transport Operations and Logistics	0810	Engineering Mechanics
<b>0704</b>	<b>Occupational Field: Design, Decorating, Visual and Performing Arts and Craft Production Related Occupations</b>				
2163	Product and Garment Designers	2	Design Studies	0302	Design and Applied Arts
2166	Graphic and Multimedia Designers	2	Design Studies	0305	Fine and Studio Art
2651	Visual Artists	2	Performing Arts	0305	Fine and Studio Art
2652	Musicians, Singers and Composers	2	Performing Arts	0306	Music
2653	Dancers and Choreographers	2	Performing Arts	0301	Dance
2654	Film, Stage and Related Directors and Producers	2	Performing Arts / Film Television and Video	0303	Drama/Theatre Arts
2655	Actors	2	Performing Arts	0303	Drama/Theatre Arts
2656	Announcers On Radio, Television and Other Media	4	Communication Studies	0503	Radio, Television and Digital Communication
2659	Creative and Performing Artists Not Elsewhere Classified	2	Performing Arts	03	VISUAL AND PERFORMING ARTS
3118	Draughtspersons	2	Design Studies	0305	Fine and Studio Art

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Unit Group		Field	Subfield	Closest related CESM Group	
3431	Photographers	4	Film Television and Video	0302/ 0304	Design and Applied Arts / Film/Video and Photographic Arts
3432	Interior Designers and Decorators	2	Design Studies	0205/ 0302	Interior Architecture and Design / Design and Applied Arts
5161	Astrologers, Fortune-tellers and Related Workers	11	Hospitality, Tourism, Travel, Gaming and Leisure	2099	Social Sciences, Other
5241	Fashion and Other Models	2	Performing Arts	0302	Design and Applied Arts
5242	Sales Demonstrators	2	Design Studies	0205	Interior Architecture and Design
6431	Painters and Related Workers	2	Visual Arts	0305	Fine and Studio Art
6432	Spray Painters and Varnishers	12	Physical Planning Design and Management	0305	Fine and Studio Art
6521	Blacksmiths, Hammersmiths and Forging Press Workers	6	Engineering and Related Design	0302	Design and Applied Arts
6522	Toolmakers and Related Workers	6	Engineering and Related Design	0302	Design and Applied Arts
6524	Metal Polishers, Wheel Grinders and Tool Sharpeners	6	Fabrication and Extraction	0302	Design and Applied Arts
6611	Precision-instrument Makers and Repairers	6	Fabrication and Extraction	0302	Design and Applied Arts
6612	Musical Instrument Makers and Tuners	6	Fabrication and Extraction	0302	Design and Applied Arts
6613	Jewellery and Precious Metal Workers	6	Fabrication and Extraction	0305	Fine and Studio Art
6614	Potters and Related Workers	6	Fabrication and Extraction	0305	Fine and Studio Art
6615	Glass Makers, Cutters, Grinders and Finishers	6	Fabrication and Extraction	0305	Fine and Studio Art

Unit Group		Field	Subfield	Closest related CESM Group	
6616	Sign Writers, Decorative Painters, Engravers and Etchers	6	Fabrication and Extraction	0305	Fine and Studio Art
6617	Handicraft Workers in Wood, Basketry and Related Materials	2	Visual Arts	0305	Fine and Studio Art
6618	Handicraft Workers in Textile, Leather and Related Materials	2	Visual Arts	0305	Fine and Studio Art
6621	Pre-press Technicians	6	Manufacturing and Assembly (	0305	Fine and Studio Art
6622	Printers	6	Manufacturing and Assembly (	0305	Fine and Studio Art
6623	Print Finishing and Binding Workers	6	Manufacturing and Assembly (	0305	Fine and Studio Art
6822	Cabinet Makers and Related Workers	6	Fabrication and Extraction	0305	Fine and Studio Art
6831	Tailors, Dressmakers, Furriers and Hatters	6	Fabrication and Extraction	1006	Apparel and Textiles
6832	Garment and Related Patternmakers and Cutters	6	Fabrication and Extraction	1006	Apparel and Textiles
6833	Sewing, Embroidery and Related Workers	6	Fabrication and Extraction	1006	Apparel and Textiles
6834	Upholsterers and Related Workers	6	Fabrication and Extraction	1006	Apparel and Textiles
6835	Pelt Dressers, Tanners and Fellmongers	6	Fabrication and Extraction	1006	Apparel and Textiles
6836	Shoemakers and Related Workers	6	Fabrication and Extraction	1006	Apparel and Textiles

Unit Group		Field	Subfield	Closest related CESM Group	
6849	Craft and Related Workers not Elsewhere Classified	6	Fabrication and Extraction	0305	Fine and Studio Art
<b>0705</b>	<b>Occupational Field: Architecture, Building, Construction, Surveying and Civil Engineering Related Occupations</b>				
1323	Construction Managers	12	Physical Planning Design and Management	0203	Building/Construction Site Management
2142	Civil Engineers	6	Engineering and Related Design	0807/ 0826	Civil Engineering / Construction Engineering
2161	Building Architects	12	Physical Planning Design and Management	0201/ 0803	Architecture, General / Architectural Engineering
2162	Landscape Architects	12	Physical Planning Design and Management	0206	Landscape Architecture
2164	Town and Traffic Planners	12	Physical Planning Design and Management	0202	City/Urban, Community and Regional Planning
2165	Cartographers and Surveyors	12	Physical Planning Design and Management	0831/ 1404	Surveying Engineering / Geography and Cartography
3112	Civil Engineering Technicians	12	Civil Engineering Construction	0807/ 0826/ 0831/ 1405	Civil Engineering / Construction Engineering Surveying Engineering / Geography and Cartography / Geography and Cartography
3123	Construction Supervisors	12	Building Construction	0203	Building/Construction Site Management
5153	Building Caretakers	12	Building Construction	0203	Building/Construction Site Management
6411	House Builders	12	Building Construction	0812	Engineering Science
6412	Bricklayers and Related Workers	12	Building Construction	0812	Engineering Science
6413	Stonemasons, Stone Cutters, Splitters and Carvers	12	Building Construction	0812	Engineering Science
6414	Concrete Placers, Concrete Finishers and Related Workers	12	Building Construction	0812	Engineering Science

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Unit Group		Field	Subfield	Closest related CESM Group	
6415	Carpenters and Joiners	12	Building Construction	0812	Engineering Science
6421	Roofers	12	Building Construction	0812	Engineering Science
6422	Floor Layers and Tile Setters	12	Building Construction	0812	Engineering Science
6423	Plasterers	12	Building Construction	0812	Engineering Science
6424	Insulation Workers	12	Building Construction	0812	Engineering Science
6425	Glaziers	12	Building Construction	0812	Engineering Science
6426	Plumbers and Pipe Fitters	12	Building Construction	0812	Engineering Science
8312	Civil Engineering Labourers	12	Building Construction	0812	Engineering Science
8313	Building Construction Labourers	12	Building Construction	0812	Engineering Science
8622	Odd Job Persons	12	Building Construction	0812	Engineering Science
<b>8</b>	<b>Metal, Manufacturing, Production and Mining Related Occupations</b>				
<b>0801</b>	<b>Occupational Field: Industrial, Manufacturing and Chemical Production and Engineering Related Occupations</b>				
1321	Manufacturing Managers	3	Generic Management	0401/ 0829	Business Administration, Management and Operations / Manufacturing Engineering
2141	Industrial and Production Engineers	6	Engineering and Related Desig	0828	Industrial Engineering
2145	Chemical Engineers	6	Engineering and Related Desig	0806	Chemical Engineering
3111	Chemical and Physical Science Technicians	6	Engineering and Related Desig	1401	Physical Sciences, General
3111	Chemical and Physical Science Technicians	6	Engineering and Related Desig	1403	Atmospheric Sciences and Meteorology
3111	Chemical and Physical Science Technicians	6	Engineering and Related Desig	1404	Chemistry
3116	Chemical Engineering Technicians	6	Engineering and Related Desig	0806	Chemical Engineering

Unit Group		Field	Subfield	Closest related CESM Group	
3122	Manufacturing Supervisors	3	Generic Management	0401/ 0829	Business Administration, Management and Operations / Manufacturing Engineering
3133	Chemical Processing Plant Controllers	6	Fabrication and Extraction	0806	Chemical Engineering
3134	Petroleum and Natural Gas Refining Plant Operators	6	Fabrication and Extraction	0821	Petroleum Engineering
3135	Metal Production Process Controllers	6	Manufacturing and Assembly	0829	Manufacturing Engineering
6511	Metal Moulders and Coremakers	6	Manufacturing and Assembly	0812	Engineering Science
6512	Welders and Flame Cutters	6	Manufacturing and Assembly	0812	Engineering Science
6513	Sheet Metal Workers	6	Manufacturing and Assembly	0812	Engineering Science
6514	Structural Metal Preparers and Erectors	6	Manufacturing and Assembly	0812	Engineering Science
6515	Riggers and Cable Splicers	6	Manufacturing and Assembly	0812	Engineering Science
6843	Product Graders and Testers (Except Foods and Beverages)	6	Manufacturing and Assembly	0829	Manufacturing Engineering
8329	Manufacturing Labourers not Elsewhere Classified	6	Manufacturing and Assembly	0812	Engineering Science
<b>0802</b>	<b>Occupational Field: Demolition, Extraction and Mining and Metallurgical Engineering Related Occupations</b>				
1322	Mining Managers	3	Generic Management	0401/ 0817	Business Administration, Management and Operations / Mining and Mineral Engineering
2146	Mining Engineers, Metallurgists and Related Professionals	6	Engineering and Related Desig	0816	Metallurgical Engineering



Unit Group		Field	Subfield	Closest related CESM Group	
2146	Mining Engineers, Metallurgists and Related Professionals	6	Engineering and Related Desig	0817	Mining and Mineral Engineering
3117	Mining and Metallurgical Technicians	6	Engineering and Related Desig	0816	Metallurgical Engineering
3117	Mining and Metallurgical Technicians	6	Engineering and Related Desig	0817	Mining and Mineral Engineering
3121	Mining Production / Operations Supervisors	3	Generic Management	0401/ 0817	Business Administration, Management and Operations / Mining and Mineral Engineering
6842	Shotfirers and Blasters	6	Fabrication and Extraction	0817	Mining and Mineral Engineering
7111	Miners and Quarriers	6	Fabrication and Extraction	0817	Mining and Mineral Engineering
7113	Well Drillers and Borers and Related Workers	6	Fabrication and Extraction	0817	Mining and Mineral Engineering
8311	Mining and Quarrying Labourers	6	Fabrication and Extraction	0817	Mining and Mineral Engineering
<b>9</b>	<b>Transportation and Mobile Plant Operating Related Occupations</b>				
<b>0901</b>	<b>Occupational Field: Aerospace and Marine Transportation Related Occupations</b>				
3151	Ships' Engineers	6	Engineering and Related Desig	0818	Naval Architecture and Marine Engineering
3152	Ships' Deck Officers and Pilots	6	Engineering and Related Desig	0818	Naval Architecture and Marine Engineering
3153	Aircraft Pilots and Related Associate Professionals	11	Transport Operations and Logistics	0801	Aerospace, Aeronautical and Astronautical Engineering
3154	Air Traffic Controllers	11	Transport Operations and Logistics	0801	Aerospace, Aeronautical and Astronautical Engineering
3155	Air Traffic Safety Electronics Technicians	6	Engineering and Related Desig	0801	Aerospace, Aeronautical and Astronautical Engineering

Unit Group		Field	Subfield	Closest related CESM Group	
7351	Ships' Deck Crews and Related Workers	6	Engineering and Related Desig	0818	Naval Architecture and Marine Engineering
<b>0902</b>	<b>Occupational Field: Driving Related Occupations</b>				
5165	Driving Instructors	11	Transport Operations and Logistics	0899	Engineering, Other
7311	Locomotive Engine Drivers	11	Transport Operations and Logistics	0899	Engineering, Other
7321	Motorcycle Drivers	11	Transport Operations and Logistics	0899	Engineering, Other
7322	Car, Taxi and Van Drivers	11	Transport Operations and Logistics	0899	Engineering, Other
7331	Bus and Tram Drivers	11	Transport Operations and Logistics	0899	Engineering, Other
7332	Heavy Truck and Lorry Drivers	11	Transport Operations and Logistics	0899	Engineering, Other
7341	Mobile Farm and Forestry Plant Operators	11	Transport Operations and Logistics	0899	Engineering, Other
7342	Earthmoving and Related Plant Operators	11	Transport Operations and Logistics	0899	Engineering, Other
7343	Crane, Hoist and Related Plant Operators	11	Transport Operations and Logistics	0899	Engineering, Other
7344	Lifting Truck Operators	11	Transport Operations and Logistics	0899	Engineering, Other
8331	Hand and Pedal Vehicle Drivers	11	Transport Operations and Logistics	0899	Engineering, Other
8332	Drivers of Animal-drawn Vehicles and Machinery	11	Transport Operations and Logistics	0899	Engineering, Other

