GUIDELINES: ORGANISING FRAMEWORK FOR OCCUPATIONS (OFO) 2012

The Organising Framework for Occupations

This guideline addresses the purpose and structure of the Organising Framework for Occupations (OFO) 2012 in the South African skills development environment. It is aimed at providing a deeper understanding on using the OFO and provides general guidance to different users (e.g. SETAs, Employers, Skills Development Facilitators etc) on how to engage with the OFO and how to integrate it in industry.

> **The purpose of the Organising Framework for Occupations is to establish a common language for talking about occupations. In terms of skills development it enables labour market dialogue for talking about skills demand and supply.**

The Organising Framework for Occupations was developed with the assistance of the giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH *and* IT Aware AWARE OF YOUR COMPANY NEEDS

CONTENTS

1   WHAT IS THE OFO

In essence, the OFO is a coded occupational classification system. It is the Department of Higher Education and Training's key tool for identifying, reporting and monitoring skills demand and supply in the South African labour market.

The OFO is constructed from the bottom-up by:

- analysing jobs and identifying similarities in terms of a tasks and skills;

- categorising similar jobs into occupations; and

- classifying these occupations into occupational groups at increasing levels of generality.

The OFO adds value to skills development planning and implementation purposes in that it:

- provides a common language when talking about occupations;

- captures jobs in the form of occupations; and

- groups occupations into successively broader categories and hierarchical levels based on similarity of tasks, skills and knowledge.

2   BACKGROUND ON THE DEVELOPMENT AND UPDATING OF THE OFO

During 2004 the Department of Labour (DoL), supported by the then GTZ, decided to better link demand and supply by using "occupations" as the common denominator for analysis. However, SASCO at that stage reflected ISCO-88 but while this has proven to be a powerful information tool, it did not provide the detail that South Africa requires for good skills development planning and project intervention.

The debate on what constitutes an occupation has been inviting views from various origins, both local and international. Over time international agreement has been reached on the definition of occupational groupings. The International Labour Organisation (ILO) consolidated these views into what is known as the International Standard Classification of Occupations (ISCO).

Statistics South Africa adapted this classification system for the purposes of conducting its national census data and to track the shifting occupational profile of the country's workforce. It was known as the South African Standard Classification of Occupations (SASCO). SASCO however was outdated and did not define occupations in more detail and could therefore not be used by the Department of Labour for skills planning purposes.

A scan of international developments was initiated to find a more representative framework. In a similar attempt, the Australian Bureau of Statistics (ABS) and Statistics New Zealand, initiated a wide ranging consultative and stakeholder-driven process in March 2001 to update ISCO 1988. This process culminated in July 2005 in a more representative framework (ANZSCO).

As the content of ANZSCO 2005 reflected the occupational environment more accurately and also included occupations and occupational descriptors, it was used as the basis for the Organising Framework for Occupations (OFO) to assist in the process of skills planning within and across sectors.

The DoL adopted the use of the OFO (which extended ANZCO by incorporating additional occupations and occupational categories identified through research and consultation) in 2005 as a tool for identifying, reporting and monitoring scarce and critical skills and maintained it through an annual updating process. This process and responsibility was taken over by the Department of Higher Education and Training (DHET) in 2009.

During the annual updating process in 2010 the DHET, supported by GIZ, decided that the annual updating of the OFO should also include adapting the OFO (Version 9) to better reflect the structure of ISCO - 08. The reasons for this decision included:

- The Department of Higher Education and Training uses the OFO for skills planning. Version 9 of the OFO was based on ANZSCO, which was an adaptation of ISCO - 88. STATS South Africa used SASCO, which was based on ISCO – 88, as its classification system. The newer version of ISCO, version 08, offered more comprehensive framework structure. The DHET has thus decided to align the OFO to the ISCO – 08 structure in an attempt to create a standardised framework which would also align to the international framework.

- ISCO – 08 took a number of developments in the economies of countries all over the world into consideration, such as the developments brought about in the information and communication technology (ICT) sector, to reflect the important changes that have taken place in the world of work.

- The relation between ISCO - 08 and the United Nations' International Standard Industrial Classification of all economic activities (ISIC).

A further reason contributing to this decision related to the benefit of ease of comparison of labour market and skills information with international data.

It was further decided to change the title of the OFO to reflect the year of update (rather than a version). The OFO 2011 released in March 2011 reflected the structure, definitions and tasks of ISCO – 08 including 1259 of the total of 1320 occupations of the OFO (Version 9).

3   FRAMEWORK AND CONCEPTS OF THE OFO 2011 AND 2012

The framework used for the design and construction of ISCO - 08 and therefore the OFO 2011 and 2012 is based on two main concepts: the concept of the kind of work performed or job and the concept of skill. The classification units are therefore the **jobs** (reflected as **occupations** on the OFO) whilst the classification variable is the kind of work done (that is, the tasks and duties), and the classification criteria for identifying Major, Sub Major, Minor and Unit Groups are the two dimensions of **skill**, i.e. **skill level** and **skill specialisation**.

3.1 Job and Occupation

For the purposes of identifying the OFO occupations, the following definitions of ISCO-08 are applied1 and must be adhered to when identifying new occupational titles:

- A **job** is a set of tasks and duties carried out or meant to be carried out, by one person for a particular employer, including self employment.

- An **occupation** is a set of jobs whose main tasks and duties are characterised by a high degree of similarity (skill specialisation).

> - *The occupations identified in the OFO represent a category that encompasses a number of jobs. For example, the occupation "General Accountant" also covers the specialisation "Debtors Manager".*

Note: The output of occupations clustered under the fourth level of the OFO (Unit Group) is described in terms of tasks and a descriptor. Occupations are thus related to the tasks defined at the Unit Group and an occupation descriptor describes what the application of the variety of tasks ultimately produces or delivers in the world of work. An occupation descriptor always either indicate the unique service the occupation renders or the unique product the occupation produces in executing some or all the related tasks in a specific context.

Jobs in the workplace could thus either be related to occupations or specialisations on the OFO. The association depends on the level of uniqueness of the output of the job on the workplace.

3.2 Skill

Skill is defined as the ability to carry out the tasks and duties of a given job. Two dimensions of skill are used to arrange occupations into groups. These are skill level and skill specialisation.

3.2.1 Skill Level

Skill level is defined as a function of the complexity and range of tasks and duties to be performed in an occupation. Skill level is measured operationally by considering one or more of:

- the nature of the work performed (i.e. the complexity and range of work) in an occupation in relation to the characteristic tasks and duties defined;

- the level of formal education defined in terms of the International Standard Classification of Education (ISCED-97)2 required for competent performance of the tasks and duties involved; and

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[1] International Standard Classification of Occupations (ISCO - 08) – Conceptual Framework , page 2 of ANNEX 1

- the amount of informal on-the-job training and /or previous experience in a related occupation required for competent performance of these tasks and duties.

It must however be mentioned that the level of formal education defined in terms of the International Standard Classification of Education (ISCED-97) is only one of the measures used in determining the skill level and should be seen as indicative only. As the educational level differs between different countries this create ambiguity and Job content (i.e. tasks and duties) are thus given priority over national education and training requirements. In other words, occupations that involve the performance of broadly the same sets of tasks and duties are always classified in the same category, even in cases where national skill level requirements measured in terms of formal education are different. This is specifically relevant for Major Groups 6 and 7.

A mapping between ISCO skill levels and levels of education in ISCED 97 is provided in Table 1 below.

ISCO - 08 Skill Level	ISCED-97 groups
4	6 - Second stage of tertiary education (leading to an advanced research qualification)
	5a - First stage of tertiary education, 1st degree (medium duration)
3	5b - First stage of tertiary education (short or medium duration)
2	4 - Post-secondary, non-tertiary education
	3 - Upper secondary level of education
	2 - Lower secondary level of education
1	1 - Primary level of education

3.2.2 Skill Specialisation

Skill specialisation is considered in terms of four conceptual concepts:

- the field of knowledge required;
- the tools and machinery used;
- the materials worked on or with; and
- the kinds of goods and services produced.

3.3   Structure

Occupations are grouped into Major (one digit), Sub Major (two digits), Minor (three digits), and Unit (four digits) groupings. The structure of the OFO differs slightly from the structure of ISCO – 08 in that it has only eight Major Groups instead of ten. (The ISCO – 08 Major Group 6: Skilled Agricultural, Forestry, Fishery Workers and Major

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[2] UNESCO, 1997

Group 7: Craft and Related Trades Workers were combined. Major Group 0: Armed Forces were incorporated into the structure by adding one additional Minor Group and seven Unit Groups.)

The Major Groups are primarily based on four skill levels, however in Major Group 1 (Managers) the concept of skill level is applied primarily at the second hierarchical level (i.e. Sub Major Group). All Major Groups therefore relates to one skill level only except for Major Group 1, Managers that includes occupations at ISCO - 08 skill levels 3 and 4, at Sub Major Group level of the classification.

The eight Major Groups are:

1. Managers
2. Professionals
3. Technicians and Associate Professionals
4. Clerical Support Workers
5. Service and Sales Workers
6. Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers
7. Plant and Machine Operators and Assemblers
8. Elementary Occupations

Detailed information on the ISCO - 08 skill levels and the application thereof in the structure can be obtained from:
www.ilo.org/public/english/bureau/stat/isco/docs/annex1.doc

Within each Major Group occupational groups are arranged into Sub Major Groups, Minor Groups and Unit Groups primarily on the basis of aspects of skill specialisation.

Occupations (six digits) are subdivisions of the Unit Groups and are further detailed through specialisation and alternative occupation titles.

- Major Groups (1 digit) (e.g. 3. Technicians and Associate Professionals) are:

  ➢ The broadest level of the classification

  ➢ Distinguished from each other on the basis of skill level and the broadest concept of skill specialisation

- Sub-Major Groups (2 digits) – e.g. 31 Science and Engineering Associate Professionals are:

  ➢ Sub-divisions of major groups

  ➢ Distinguished from other sub-major groups on the basis of broadly stated skill specialisation

- Minor Groups (3 digits) – e.g. 312. Mining, Manufacturing and Construction Supervisors- are:

  ➢ Sub-divisions of sub-major groups

  ➢ Distinguished from other minor groups in the same sub-major group on the basis of less broadly stated skill specialisation

- Unit Groups (4 digits) – e.g. 3121 Mining supervisors are:

- ➢ Sub-divisions of the minor groups

- ➢ Distinguished from other unit groups in the same minor group on the basis of a finer degree of skill specialisation

- • Occupations (6 digits) – e.g. 312101 Production / Operations Supervisor (Mining) are:

- ➢ Sub-divisions of the unit groups

- ➢ Distinguished from other occupations in the same unit group on the basis of uniqueness of the output, usually due to specific application of skills and knowledge in a specific context.

- ➢ Relates to a cluster of jobs which involve the performance of a common set of tasks.

Figure 1 below illustrates the structure of the OFO:
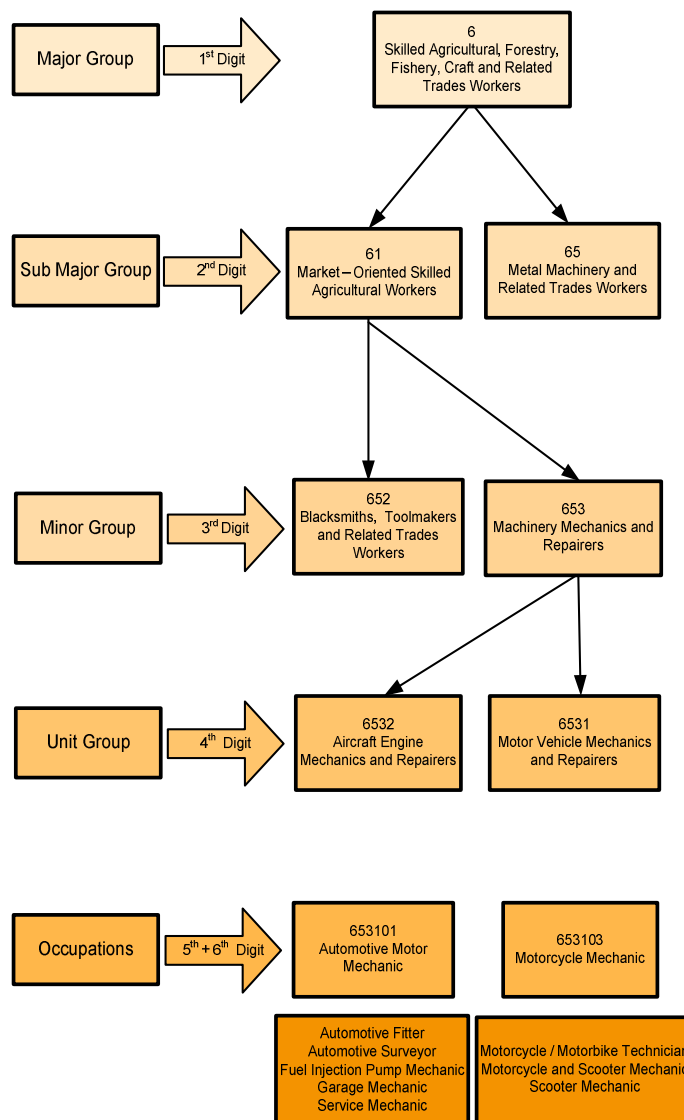
Major Groups are:
- • The broadest level of the classification
- • Denoted by 1-digit codes
- • Distinguished from each other on the basis of skill level and to a lesser degree, the broad concept of skill specialisation
- • There are 9 Major Groups each containing a Descriptor and Tasks

Sub Major Groups are:
- • Subdivisions of Major Groups
- • Denoted by 2-digit codes (Major Group plus an additional digit)
- • Distinguished from other Sub Major Groups on the basis of broadly stated skill specialisation (Except Sub Major Groups of Major Group 1 which are also distinguished on the basis of skill level)
- • There are 39 Sub Major Groups each containing a Descriptor and Tasks

Minor Groups are:
- • Subdivisions of Sub Major Groups
- • Denoted by 3-digit codes (Sub Major Group plus an additional digit)
- • Distinguished from other Minor Groups on the basis of less broadly stated skill specialisation
- • There are 125 Minor Groups each containing a Descriptor and Tasks

Unit Groups are:
- • Subdivisions of Minor Groups
- • Denoted by 4-digit codes (Minor Group plus an additional digit)
- • Distinguished from other Unit Groups on the basis of A finer degree of skill specialisation
- • There are 440 Unit Groups each containing a Descriptor and Tasks

Occupations are:
- • Subdivisions of Unit Groups
- • Denoted by 6-digit codes (Unit Group plus two additional digits)
- • Distinguished from other Occupations on the basis of a fine degree of skill specialisation
- • There are 1353 Occupations each containing a Descriptor only

Occupational descriptors are provided for every occupational grouping, including occupations (6th digit level). A list of the associated tasks are also provided for every occupational grouping (up to 4th digit level).

Figure 2 below provides an indicative comparison between the skill level of occupational groups to the National Qualifications Framework as well as with the entry, intermediate and advanced levels referred to in the National Skills Development Strategy.

NSDS	NQF Level	Skill Level	OFO Major Groups			
HIGH	10 ↑ 7	4	2 Professionals			
						1 Managers
INTERMEDIATE	6	3	3 Technicians and Associate Professionals			
	5	2	4 Clerical Support Workers	5 Service and Sales Workers	6 Skilled Agricultural, Forestry, Fishery, Craft & Related Trades Workers	7 Plant and Machine Operators and Assemblers
	4					
ENTRY	3					
	2	1	8 Elementary Occupations			
	1					

4   ALIGNING THE OFO TO ISCO - 08

4.1   Basic Principles and Processes

An attempt was made to keep the OFO version 9 structure and simply ensure that all Unit groups of ISCO – 08 are reflected. This however was not possible because of the mismatch of the descriptors and tasks at Major, Sub Major and Minor Groups of the OFO version 9 with the Unit Group descriptors and tasks of ISCO-08.

It was then decided to use the ISCO-08 structure at Sub Major, Minor and Unit Group levels and allocate the OFO version 9 occupations to the related new Unit Groups but to keep to 8 Major Groups (as per the OFO version 9) instead of 10 (as per ISCO - 08) as to not affect the IT database structures of users of the OFO.

In order to achieve the above, Major Groups 6 (Skilled Agricultural, Forestry and Fishery Workers) and 7 (Craft and Related Trades Workers) of ISCO - 08 were combined and one

additional Minor Group and seven Unit Groups were added to include Armed Forces occupations reflected in Major Group 10 of ISCO - 08.

The allocation of occupations to the new structure was informed by similarity of output of the occupations related to the unit group definitions and suggested examples supplied by ISCO-08.

4.2   Structural Departures Between ISCO - 08 and the OFO

The ISCO macro structure was followed throughout the design of the new OFO. Armed forces were however not kept as a separate Major Group and Major Group 6 and 7 were combined. Major Group 8 then became Major Group 7 and Major Group 9 then became Major Group 8 and all related numbers were changed accordingly. All Unit Groups ending with a 0 (indicating that the Minor Group was not further sub divided in Unit Group) was changed to end with a 1 to be consistent to the OFO Version 9 numbering system.

Table 2 below summarises the numbering or structural departures from ISCO 08:

	ISCO - 08		OFO 2011 and 2012
1210	Finance Managers	1211	Finance Managers
1330	Information and Communications Technology Service Managers	1331	Information and Communications Technology Service Managers
2250	Veterinarians	2251	Veterinarians
2310	University and Higher Education Teachers	2311	University and Higher Education Teachers
2320	Vocational Education Teachers	2321	Vocational Education Teachers
2330	Secondary education teachers	2331	Secondary education teachers
3230	Traditional and Complementary Medicine Associate Professionals	3231	Traditional and Complementary Medicine Associate Professionals
6	Skilled Agricultural, Forestry and Fishery Workers	6	Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers
6130	Mixed Crop and Animal Producers	6131	Mixed Crop and Animal Producers
6210	Forestry and Related Workers	6211	Forestry and Related Workers
7	Craft and Related Trades Workers	64	Building and Related Trades Workers
		65	Metal, Machinery and Related Trades Workers
		66	Handicraft and Printing Workers
		67	Electrical and Electronics Trades Workers
		68	Food Processing, Wood Working, Garment and Other Craft and Related Trades Workers
8	Plant and Machine Operators, and Assemblers	7	Plant and Machine Operators, and Assemblers
9	Elementary Occupations	8	Elementary Occupations
0	Armed Forces Occupations	1347	Armed Forces Managers
		542	Commissioned and Non-Commissioned Armed Forces Officers

Table 3 below provides a comparison of the structures of OFO Version 9 and OFO 2011 and 2012.

OFO version 9 Structure	Skill level	OFO 2011 and 2012 structure	Skill level
1 Managers	4+5	1 Managers	
2 Professionals	5	2 Professionals	4
3 Technicians and Trades Workers	3 + 4	3 Technicians and Associate Professionals	3
4 Community and Personal Service Workers	1 – 4	5 Service and Sales Workers	2
5 Clerical and Administrative Workers	1 – 4	4 Clerical Support Workers	2
6 Sales Workers	1 – 4	6 Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers	2
7 Machienery Operators and Drivers	2	7 Plant and Machine Operators, and Assemblers	2
8 Elementary Workers	1+2	8 Elementary Occupations	1

Table 4 below provides a comparison between ISCO – 08, the OFO 2011and 2012 and the OFO version 9.

ISCO -08 Structure	OFO 2011 and 2012	Relation to OFO version 9
1 Managers	1 Managers	Most of Major Group 1
2 Professionals	2 Professionals	Most of Major Group 2
3 Technicians and Associate Professionals	3 Technicians and Associate Professionals	New category comprising sub major group 31 some occupations from Major Groups 1, 2, 4 and 5
4 Clerical Support Workers	4 Clerical Support Workers	Most of Major Group 5
5 Service and Sales Workers	5 Service and Sales Workers	Combination of mainly Major Groups 4 and 6
6 Skilled Agricultural, Forestry and Fishery Workers	6 Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers	Sub Major Groups 32 -39 + additional Crafts
7 Craft and Related Trades Workers		
8 Plant and Machine Operators, and Assemblers	7 Plant and Machine Operators, and Assemblers	Most of Major Group 7
9 Elementary Occupations	8 Elementary occupations	Most of Major Group 8
0 Armed Forces		

A mapping table "Version 10 to OFO 2012 Mapping Table" has been prepared and tested and is available in electronic format to assist users to easily locate occupations in the OFO 2012 structure by using the OFO Version 10 code.

Data tables "OFO Version 2012 Data tables" have also been prepared and are available in electronic format to assist the SETAs and other users of the OFO to upload the OFO Version 2012 onto their IT systems for the purposes of generating reports such as Sector Skills Planning and Workplace Skills Plans.

5   ENHANCEMENTS TO OFO 2012

During the 2012 updating process it was decided to also reflect "green occupations" and "listed trades" on the OFO.

5.1   Green Occupations

The political will to move towards a green economy and the associated job creation will be accompanied by new and changing skills demands. These demands will be two dimensional as it will require not only new green occupations (reflected as "scarce skills") but also new skill sets (reflected as "critical skills") in existing occupations.

As the OFO is used to collect and reflect labour market information on skills needs, it has been agreed to also identify and reflect "green occupations" on the OFO 2012 to enable SETAs to better reflect skills demands in support for a green economy in their future Sector Skills Plan updates.

Based on the national and international research the following definition was applied to identify and reflect occupations as "green" on the OFO 2012:

> *Green occupations are those that have as their direct purpose the nationally identified priorities and initiatives of reducing negative environmental impact and contribute sustainably to environmental, economical and social sensitive enterprises and economies. This includes occupations that directly contribute to the maintenance of processes related to these national initiatives to:*
>
> - *Develop and adopt renewable sources of energy*
>
> - *Reduce consumption of energy, fossil fuels and raw materials*
>
> - *Enhance energy and resource efficiency*
>
> - *Reduce greenhouse gas emissions*
>
> - *Decrease waste and pollution*
>
> - *Recycle materials*
>
> - *Prevent the loss of biodiversity and restore ecosystems*

The result of the research 93 occupations were identified as "green" of which 14 was not reflected on the OFO 2011. Green occupations can be recognised by the symbol on the OFO.

5.2   Listed Trades

The National Artisan Moderation Body (NAMB) went through a process of identifying occupations to be listed as "trades".

The following definition and criteria were applied to determine whether an occupation qualified for listing as a trade:

> *An occupation where in a qualified person applies a high level of practical skills supported and re-enforced by underpinning and applied knowledge to:*

- *Manufacture, produce, service, install or maintain tangible goods, products or equipment in an engineering and/or technical work environment (excluding process controllers and operators).*

- *Use tools and equipment to perform of his/her duties.*

- *Measure and do fault finding on process, manufacturing, production and/or technical machinery and equipment to apply corrective or repair actions.*

- *Apply and adhere to all relevant health, safety and environmental legislation.*

- *Has an accumulative learning period covering knowledge, practical and workplace learning that is equivalent to three or more years.*

The route to achieve artisan status was also considered. This includes features such as:

- a structured learning programme of knowledge, practical and work experience

- a structured learning programme that must be successfully completed before a final assessment is attempted

- a final external summative assessment that must be passed and is known as a trade test.

Historic and global classification of occupations as trades was also considered.

As a result 105 occupations were endorsed for classification as a trade can be recognised by the ✖ symbol on the OFO.

5.3   Final Structure

Table 2 below outlines the final structure of the OFO 2012.

Major Groups	Sub Major Groups	Minor Groups	Unit Groups	Occupa-tions	Green Occupa-tions	Trades	ISCO Skill Level
1 Managers	4	11	32	135	3		3 + 4
2 Professionals	6	27	92	363	48		4
3 Technicians and Associate Professionals	5	20	84	267	31	1	3
4 Clerical Support Workers	4	8	29	68			2
5 Service and Sales Workers	4	14	46	109		1	2
6 Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers	7	20	84	243	7	98	2
7 Plant and Machine Operators, and Assemblers	3	14	40	134		5	2
8 Elementary occupations	6	11	33	98	4		1
Total	**39**	**125**	**440**	**1417**	**93**	**105**	

6 THE USE OF THE OFO FOR SKILLS PLANNING

6.1 Background

SETAs have been required to use the OFO in the submission of the 5 Year Sector Skills Plans and Annual Updates since it was formally adopted in August 2005. The Scarce and Critical Skills reporting format – Chapter 4 of the SSP – has enabled the identification and annual publication by the Department of Higher Education and Training of a national scarce and critical skills list. This List has also informed the identification of scarce and priority skills targets in engineering for JIPSA.

NSDS 3 requires that a credible institutional mechanism should be establishing for skills planning. PME output 5.1 states that a framework for Skills planning should be developed. Sub-output 1.1: Develop standardised frameworks for the assessment of skills supply, shortages and vacancies in the country.

Employers can use this information to broaden the indicators and drivers of scarce skills that they take into account when developing the annual WSPs and SSPs. For example,

- At individual employer level – vacancies for diesel fitters, electricians and millwrights (for example) are anticipated to occur in the coming year due to people retiring within that year. Historically, the employer has been able to fill those vacancies within 6 – 8 working weeks. However, other employers within that locality are known to be extending their operations which will mean that it may take longer to source people to fill those vacancies.

- At sub-sector and at sector level – previous year's SSPs have indicated that there is a scarcity in these occupational groupings indicated by long-term vacancies and high replacement demand.

- At national level, the Department of Higher & Training list has indicated that there is a high level of scarcity of skills in these occupations due to high demand in other sectors.

Tracking skills scarcity on the basis of demand, i.e. how many people are needed to fill jobs and occupations for work and sector operational and productive performance is essential. Tracking how the scarcity is manifested in a sub-sector, sector and across sectors is essential to inform strategies to reduce the scarcity and attain equilibrium in the labour market between demand and supply.

To date, SETA scarce and critical research has identified a number of common drivers and strategies to address scarcity – including

- Drivers: Equity considerations, movement out of the sector, retirement

- Indicators: High vacancy rates, high replacement rates

- Strategies: Bursaries, learnerships, apprenticeships, skills programmes, ISOE and FET College engagement.

Employers should provide information at occupation level so that the sector intermediaries (SETAs) are able to roll this up at the right level to enable identification

of common skills development needs and interventions – links directly to the development of occupational qualifications of the Occupational Qualifications Framework

The OFO was updated annually since its release in 2005. In 2010 the OFO (version 9) was again adapted to reflect ISCO - 08 as outlined in the previous sections.

6.2   Benefits of Using the OFO

The purpose for using the OFO across the SETAs and the Department is to ensure consistency in reporting and monitoring in order that trends can be identified and aggregated across economic sectors. The information so collected will enable the Department of Higher Education & Training to develop the National Guide on occupational or employment trends as per "Goal 1: Establishing a credible institutional mechanism for skills planning of the NSDS 3". This also provides SETAs with the opportunity to develop strategies jointly across their sub-sectors and with other economic sectors facing similar skills shortages (scarce and/or critical).

The value of using the OFO for industry is the following:

- Job titles are more consistent and specific to the output of a post. The profiles developed for occupations could be used to inform post profiles and job descriptions.

- The curricula and assessment specifications developed for occupations could inform performance assessment processes as a benchmark.

- Labour market consistency in naming convention when advertising vacancies.

- Ease of generating legislated reports.

- Link to Occupational Qualifications.

  ➢ Occupational tasks form the starting point for occupational qualification development and assessment.

  ➢ Competence or workplace output is linked to specific tasks, for which curriculum components and standards are being developed.

- Occupational pathways, developed by the QCTO could be used to inform career management of occupational groupings in the workplace.

7   HOW TO USE THE OFO

7.1   Mapping Job Titles to Occupations to the OFO

The accuracy with which organisations articulate and relate their structure to the occupations on the framework is vital for the successful management of skills development within a specific sector. It is important that organisations interrogate previous mapping processes by using the mapping table which relates previous mapping exercises to the latest version of the OFO 2012 to increase the accuracy thereof.

The mapping table that relates the OFO version 10 to the OFO 2012 can be used by finding the corresponding number of the previous version of the framework with the latest version. Vlookup in excel is the best tool to use for this purpose.

7.2   Clustering Tasks and Knowledge

The starting point for developing and understanding the Organising Framework for Occupations is the identification of similar outputs. These "outputs" are embedded in "job descriptions" and not in job titles.

> *SETAs and employers tend to try and identify the appropriate occupation listed on the OFO by similarity of the job title that is used by the particular employer or in that sector / sub-sector. Finding the appropriate occupation on the OFO always begins by finding the appropriate set of tasks linked to the description of the occupation – not similarity with the title. The output or unique contribution the job makes in the world of work thus drives the identification of occupations on the OFO, not job title.*

An individual occupation on the OFO is identified by finding its appropriate code through an examination of:

- Its descriptor
- Where it appears in the OFO (unit group, minor, sub-major and major groups)
- Tasks which are described at unit group level
- Similarity in terms of knowledge base
- Alternate titles and specialisations linked to it

Experience has shown that the reasons for mapping jobs to wrong occupations or not finding a matching occupation is that not all job titles are reflected on the framework as an occupation, alternative title or specialisation. It is therefore important to interpret the appropriate match in terms of similarity of the criteria mentioned above.

7.3   Defining the unique contribution a job makes in the workplace

Outputs should be defined by identifying the unique contribution a job makes to a work context.

This "contribution" is based on asking the following questions:

1. What is it that people will ask you for?

- What are the unique objects or services you provide?

2. What do you keep yourself busy with?

- What are the most important or critical activities you are involved in?

3. What is the unique contribution you make to the place of work?

- How do you convert inputs into products or services?

- What value do you add to the objects that form part of your work OR what is the unique value of the service you provide to your customers?

The output of these statements can then be combined into a sentence and compared to occupational descriptors and tasks on the OFO.

A new/additional occupation or specialisation related to an occupation would only be considered if outputs are uniquely different. This process of adding or changing occupations on the OFO should be referred to the relevant SETA.

7.4   Mapping Jobs to Occupations on the OFO

The greatest challenge in mapping an organisation's job titles to the OFO is identifying related outputs. The following are guidelines, aimed at helping employer's find the most appropriate occupation that matches their job outputs.

7.4.1   Role of SETAs

This guide is part of the SETA's support and aimed at assisting employers to articulate their post structure (organogram) in respect of occupations on the OFO. While SETAs can't do the actual mapping for their member organisations, a methodology and supporting software was developed to assist employers to find appropriate occupations.

SETA will only be able to deliver against the objectives of NSDS III in terms of occupational qualifications if they direct their reports to defining reports and their business in terms of occupations. The OFO and reporting in terms of the OFO is thus pivotal for SETA performance.

The following paragraph under paragraph 5.1 of the NSDS III obliges SETAs to articulate all their actions in terms of occupations: "SETAs must ensure that there is strong employer leadership and ownership of sector skills activities and be able to articulate the collective skills needs of their stakeholders/members to the highest standard. Together with the stakeholders and other partners, they are responsible for the monitoring and managing of occupational standards to make sure that provision of training, including the qualifications gained, meet sector, cross-sector and occupational needs."

7.4.2   Role of Employers

Employers are to cluster post titles in job titles that can then be mapped to occupations on the OFO. New post titles generated in the organisation should be linked to occupations when they are created. The OFO could be used to guide the naming convention for job and post titles. A starting point for this naming convention must always be the descriptor of the occupations on the OFO.

Such alignment to the OFO will not only curb the confusion in industry caused by similar job titles referring to completely different outputs, it will also ensure better alignment of learning to workplace needs as the Quality Council for Trades and Occupations will direct all future qualification development (reference QCTO media statement on its role in November 2011 – document attached) to occupations listed on the OFO.

7.4.3 Sources Available

Three sources are available to view and use the OFO:

1. A set of tables, available in Excel, which should be used to update the HR systems of an organisations and SETAs.

2. A searchable PDF document that should be available on all SETA websites as well as the DHETwebsite.

3. A searchable utility available at www.nopf.co.za specifically developed to search and interrogate the OFO.

4. A mapping utility developed by IT Aware that assists organisations to accurately map their posts or jobs to the alternative / specialisation titles and occupations on the OFO. This utility also forms the basis for the accurate base data required for WSPs and ATRs

It is advised that the HR system of organisations be updated with the latest version of the OFO to ensure the future titles generated are updated.

The search utility should be used to identify the occupations in an organisation. An initial exercise to try and find specific occupations on the system is advisable to introduce and orientate people to the available occupations and specifically the thinking required to identify the most applicable occupation.

7.4.4 Refine organisation's job titles list to map to the OFO

7.4.4.1 Simplify, using generic titles

Compile a list of all the job titles in the organisation.

- Remove all abbreviations and acronyms like CEO, COO OH&S.

- Remove all indicators of seniority such as chief, senior, junior, only if the indicator would not have a bearing on the occupation that the job relates to. Example: If Senior Accountant relates to a management position the "Senior" should not be removed as removal would lead to the job being associated with an occupation in the Professional Major Group.

- Remove all appointment levels relating to grade or level of employment (Grade 1, Level 1, etc) – same principle as above applies – only remove appointment level if the level does not influence the occupation mapping.

This will reduce the list of titles that need to be mapped to the OFO. Simplifying the list will ensure that there is consistency when you map job titles to occupations and occupational codes in your organisation. In general, employers find that simplifying the job title list in this way reduces the list of titles that need to be mapped to the OFO by up to 70%.

Example: A senior surveyor, junior surveyor and assistant surveyor all could relate to the occupation 216502 – Surveyor. Ultimately you need to have a table that links every

post to an OFO code to be able to report in your WSP on race, gender and age related to the occupations in your organisation.

Job Title	Generic Job Title	OFO Occupation	OFO Code
Senior Surveyor	Mine Surveyor	Surveyor	216502
Junior Surveyor	Mine Surveyor	Surveyor	216502
Surveyor Assistant	Geological Survey Field Assistant	Surveyor's Assistant	831310

Use of foreman, team leader and supervisor titles – supervisor, foreman and team leader are regarded as job levels within the occupation the person is responsible for leading or supervising. Industry requires supervisors and team leaders to direct the activities of people in particular jobs or contexts. For the purposes of OFO mapping, supervisors, team leaders and foreman are mapped against the occupation and the supervising or team leading tasks and responsibilities are regarded as critical skills for the performance of that job and can be listed as such in WSP and ATR reporting formats.

Exception: The OFO has a Minor Group for Mining, Manufacturing and Construction Supervisors – Minor Group 312. This allows supervision in the production and operation related occupations to be mapped to Major Group 3 –Technicians and Associate Professionals.

Example: Mine Operations Foreman and Shift Foreman should thus be mapped to 312101: Production / Operations Supervisor (Mining), but a Supervisor HR Clerk should be mapped to 441601: Human Resources Clerk - under Critical Skills either Supervisory or Team Leading could be listed if the specific specialisation needs to be identified.

6.4.4.2   Match titles using application contexts

In order to appropriately map context or output specific jobs in your organization against OFO occupation titles, you will need to do a deeper analysis. For some of the job titles you will need to examine the job purpose statement (job output descriptor).

Example: There are three Business Analysts on the OFO. You need to know what the specific output of the Business Analyst in your organisation is in order to determine the most accurate map.

Generic Job Title	Job Purpose / Output	OFO Descriptor	OFO Occupation	OFO Code
Business Analyst	To develop strategic financial analyses to enhance business planning and revenue / income	Develops and implements financial plans for individuals and organisations, and advises on investment strategies and their taxation implications, securities, insurance, pension plans and real estate.	Financial Investment Advisor	241301
Business Analyst	To analyse and develop ICT system requirements to enable and enhance business / organizational performance	Evaluates processes and methods used in existing ICT systems, proposes modifications, additional system components or new systems to meet user needs as expressed in specifications and other documentation.	ICT Systems Analyst	251101

7.4.4.3   Match titles using occupation descriptors

Read the Occupation Descriptor. Titles are not comprehensive enough to accurately indicate job outputs or purpose in the workplace. The majority of occupations on the OFO have a descriptor that describes the occupation's output in more detail. If the descriptor associated with an occupation title does not relate to the output of the job title in your organisation then a more appropriate occupation title must be identified by mapping the job output / purpose statement to the appropriate descriptor.

Example: Ventilation officer could relate to more than one occupation, depending on the descriptor, not title. Some mines would relate a ventilation officer to health and safety occupations, other relate it to technicians, and yet others to engineers responsible for designing ventilation systems. The title is thus not operative; the descriptor defining the output rather informs the mapping process. Read the Occupation Descriptor – titles are not comprehensive enough to accurately indicate job outputs or purpose in the workplace. The majority of occupations on the OFO have a descriptor that describes the occupation's output in more detail. If the descriptor associated with an occupation title does not relate to the output of the job title in your organisation then a more appropriate occupation title must be identified by mapping the job output / purpose statement to the appropriate descriptor.

Summary: Tips to improve search effectiveness

The following technical aspects must be kept in mind in the mapping process:

- Check your spelling – The spelling of words often differs from the spelling on the OFO. Chances are that the job you look for is on the OFO, but you are using one word, instead of two, or vice versa – remember abbreviations and acronyms are discouraged.

  Example: Industry spells Platelayer as one word, but on the OFO it is two words (Plate Layer) under 651202 – Welder.

- Use the smallest specific definer of the job (shortest word) in your search specification. The focus of the job should be used to find the relevant occupation. Rather have three or four investigators to choose from, based on their descriptors.

  Example: If you need to find the code for an assistant accountant you need to search for an accountant, if you search for an assistant you will find a clerical worker, not professional.

- The 8 Major Groups are clustered in terms of OUTPUT, not qualifications or salary.

- Relate jobs to occupation in terms of OUTPUT, not title (ventilation officer – ask what is OUTPUT, health & safety, installing ventilation system or designing them? The output would relate to either health & safety officer, ventilation technician or engineer related occupation)

- Team leaders, etc are linked to the occupation they are leading

  - Exception: Manufacturing, Processing & Mining

  - Supervisors are regarded as managers

  - Shift Boss thus not line occupation, but Production / Operations Supervisor (Mining)

- Paterson Grading only used to distinguish between line related occupations & management

  - Senior Surveyor: D & above = Resources Manager (Major Group 1), C & lower Surveyor (Major Group 2)

  - Managers' primary function is managing people & processes, secondary line function

- Occupations are linked to POSTS, not employees or their qualifications (ie, a post where person has masters degree in engineering, but the output is to manage the section occupation is management related Major Group 1, not engineering related Major Group 2)

- When a suitable occupation cannot be identified the next level of the OFO should at least be indicated (see process described in next section). If no match could be found at all the major Group must at least be selected.

- All posts related to learning should be mapped to code 9 – Learners.

> *Please do not print the Excel Spreadsheets containing the OFO documents; we need to save on the amount of paper we use.*

7.4.4.4   What to do if you can't find a suitable occupation

It might happen that you do not find a suitable occupation to map a specific job title to when you do a word search. In such instances you need to use the structure of the OFO to guide you to the most appropriate occupation.

Example: Let's assume you need to map an Analytical Controller to the OFO.

1. Start with finding a descriptor, else you will get lost in the detail:

    Descriptor of Analytical Controller: Analyze organic and inorganic compounds to determine chemical and physical properties, composition, structure, relationships, and reactions, utilizing chromatography, spectroscopy, and spectrophotometry techniques.

2. Now start at the top of the OFO – which of the 8 Major Group descriptors best represent the stated descriptor?

    Group 2: Professionals:- Professionals increase the existing stock of knowledge, apply scientific or artistic concepts and theories, teach about the foregoing in a systematic manner, or engage in any combination of these activities.

3. Next you need to ask which Sub Major group (there are 6, code 21 to 26) best represent the descriptor Sub Major Group 21 - Physical, mathematical and engineering science professionals conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to fields such as physics, astronomy, meteorology, chemistry, geophysics, geology, mathematics, statistics, computing, architecture, engineering, and technology.

4. Now you need to find the Minor Group (there are 6, code 211 to 216) that best represents the descriptor Minor Group 211 - Physical and earth science professionals conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to physics, astronomy, meteorology, chemistry, geology and geophysics.

5. The next question is which Unit Group (there are 4, code 2111 to 2114 and 2113 is the most suitable Unit Group 2113 - Chemists conduct research, improve or develop concepts, theories and operational methods, or apply scientific knowledge relating to chemistry, to develop new knowledge or products and for quality and process control.

6. Now for the occupation: There is 1, codes 211301, Chemist: Studies the chemical and physical properties of substances, and develops and monitors chemical processes and production.

8   PROCESS AND FORMAT FOR CHANGES TO THE OFO

8.1   Process for OFO Updates

It is important to note that the OFO will be updated bi-annually to reflect changes and/or additions identified by SETAs and included in the SSPs or annual updates with regards to new Occupations or additional Alternative Titles or Specialisations. Any changes to information submitted by SETAs will be shared and communicated to all SETAs as part of the DHET's evaluation process so that SETAs are able to adapt their records accordingly.

Updates to the OFO have been problematic due to the constant contradicting requests by stakeholders to change the structure of the OFO. Using ISCO – 08 as the standardised structure eliminates the necessity to make judgement decisions leading to inconsistencies and duplications. It will also make future updates to the OFO less cumbersome. Updates will thus only include the addition or moving of occupations and alternative titles or specialisations with clear reference to the tasks, descriptors and examples supplied by ISCO–08.

SETAs are expected to liaise with their constituencies on a regular basis to ensure they are kept up to date with the workplace needs required to deliver outputs. The required output needs and how it relates to occupations forms the cornerstone of updating the OFO.

The Department of Higher Education has instituted a standard process and format for SETAs to recommend amendments to the OFO on a bi-annual basis. Occupations flagged as trades are being administered by National Artisan Moderation Body (NAMB). The administration process is sanctioned by Government Gazette – please refer to the Gazette: SKILLS DEVELOPMENT ACT, 1998 LISTING OF OCCUPATIONS AS TRADES FOR WHICH ARTISAN QUALIFICATIONS ARE REQUIRED for more details. All requests or suggestions for changes to occupations with a indicator (list of occupations also in mentioned Gazette) must be forwarded to NAMB, not to SETAs. SETAs receiving such application need to forward them to NAMB for ratification before changes will be incorporated in the OFO. The same template for changes to occupations must be used for trade suggested changes.

8.2   Format for Submitting Requests

When requesting updates the information indicated below must be submitted to the DHET in an excel spreadsheet format, following the exact order as indicated in the diagram below. Changes to the OFO will be limited to the possible reasons outlined for column B below.

A	B	C	D	E	F	G	H	I
Name of submitting organisa-tion	Action Reques-ted – select from list please	Occupa-tion code to be moved, deleted or where change is required	Unit Group number where it must be moved to	Name of occupa-tion to be added or new title or where change in alternati ve titles is required	Relevant Unit Group where it must be added	Descriptor of occupa-tion to be added or changed	Alternative title to be added or deleted – column B will indicate the action required	Comments

8.2.1 Guidelines for Completing Update Requests:

No applications not conforming to the guidelines outlined below will be considered.

- All individual applications from an organisation must be on one sheet.
- The entire row of headings must be copied into excel.
- Information in cells may be wrapped but no cells may be merged.
- Columns A and B must always be completed.
- The information in column B must be completed using the following codes:
  - ➢ A= Add an occupation
  - ➢ B= Add or move alternative title / specialisation to an existing occupation or newly suggested occupation (this implies that an occupation will first be listed as changed or new and then in a new line the relevant alternative titles for the suggested change will be indicated).
  - ➢ C= Move an occupation (alternative titles and specialisations that need to be moved with the occupation must be indicated in a separate line using code B described above.)
  - ➢ D= Delete an occupation (this would imply the alternative titles associated with the occupation will also be deleted, if such alternative titles need to be retained under another occupation value B should be used)
  - ➢ E= Delete alternative title / specialisation for an existing occupation
  - ➢ F= Change an existing occupation title
  - ➢ G= Change or add a descriptor of an occupation
- If column B contains an "**A**" then columns E, F and G must be completed. It is also possible to add alternative titles / specialisation in column H provided that it is not an alternative tile or specialisation that must be moved from somewhere else.
- If column B contains a "B" then columns H and C must be completed.
- If column B contains a "C" then columns C and D must be completed. All alternative titles / specialisations will be moved with the occupation. Alternative titles and specialisations to be associated with the moved occupation must be indicated in a separate line using code B, column D and E must be completed to indicate which new occupation should receive the listed alternative titles.
- If column B contains a "D" then columns C must be completed. All alternative titles / specialisations will be deleted with the occupation. If some of these alternative titles or specialisations must be moved it must be done using code B.
- If column B contains a "E" then columns C and H must be completed.
- If column B contains a "F" then columns C and E must be completed.
- If column B contains a "G" then columns C and G must be completed.

Please use column I for any clarifying comments