CHIETA Job Title-to-OFO Occupation Mapping Overview

Several Occupations are considered to be critical, and closely related (CORE) to the Chemical Sector. The mapping of Job Titles for the purposes of 2013 WSP/ATR submissions to "CORE" Occupations on the OFO were analysed in terms of job title usage (i.e. in the occupation, across sub-sectors and equity level statuses). A summary report for each occupation per Major Occupational Group was prepared. The purpose of this Mapping Overview report is to draw attention to the most pertinent Job Title-to-OFO Occupation challenges observed.

Contents

Generic Observations 2

Managers 3

Professionals 4

Technicians and Associate Professionals 7

Clerical Support Workers 9

Service and Sales Workers 9

Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers 9

Plant and Machine Operators and Assemblers 10

Elementary Occupations 12

Generic Observations

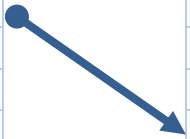
Incorrect Job Title-to-OFO Occupation mapping can be ascribed to several reasons, some of which are highlighted below:

- Indiscriminate proliferation of combinations of Job Titles used by employers and the inconsistent use and capturing of these Job Titles on personnel management information data bases, for example:
  - Different spelling and differing use of uppercase and lowercase letters for the same Job Title.
  - The inconsistent use of spaces or punctuation marks (semicolon and dash or hyphen), for the same Job Title, for example: Job Title *vs* Job Title
    Job–Title *vs* Job – Title
    Job: Title *vs* Job : Title.
  - The use of abbreviations in some titles (e.g. Snr Technician) but not in others (e.g. Senior Technician).
  - The swap over of words in the Job Title, for example Chemical Technician vs Technician: Chemical.
- Non-descriptive titles (i.e. Job Titles with no specialisation or function included in the title) such as Analyst, Engineer, Technician, Section Head, Site Supervisor, Supervisor, Inspector, Controller, Operator, Trainee or Candidate.
- The person(s) who conduct the mapping uses or accepts occupation titles on the OFO based on similarity with the job title that is used by the particular employer or in that sector/sub-sector, without consideration for similarity of tasks/outputs which are described at the unit group level of the OFO (detail that is available in the popup screen of the mapping search tool).
- Indiscriminate and inconsistent use of “engineer”, “technologist” and “technician” titles.
- Ignorance for the link between the OFO Code and the OFO Title, for example: “General Worker” mapped to a Manager’s Code (i.e. 134901), but mapped to an Elementary Worker Title (i.e. Road Construction / Maintenance Labourer). Another example is that the correct occupation code is used, but the job is mapped to a Major Group on the OFO (e.g.: “Managers” or “Professionals”), instead of the correct Occupation Title (e.g.: “Engineering Manager” or “Mechanical Engineer”).
- Persistent search for rank or salary level differentiation in occupation titles on the OFO.
- Private companies mapping their employees to Public Service occupations such as Local or Provincial Government Legislators; Senior Government Officials; Police Officers or Special Forces Operators.
- Usage/acceptance of occupation titles unique to specific sectors, but unrelated to this sector.
- Ignorance for the link between qualification (and equity level), professional registration or licence to practice requirements and an occupation.
- Indiscriminate and inconsistent mapping of Job Titles with Foreman or Supervisor or Team Leader in the title. A rule-of-thumb is when the purpose of the job is primarily about planning, organising, leading, and controlling the work of subordinates; then the incumbent can be mapped to Foreman/Team Leader/Supervisor occupation titles on the OFO. However, if the job has mainly line-function tasks and only one or two supervisory tasks then the person is mapped to the line-function occupation (for example: in addition to the work of a Fitter or Electrician, the incumbent has to quality check the work of other Fitters or Electricians).
-

Managers

- All workers mapped to 121206 Health and Safety Manager with "Officer"; "Specialist"; "Coordinator" Advisor" or "Practitioner" in their Job Titles should be reviewed and confirmed or considered for remapping to 226302 Safety, Health, Environment and Quality (SHE&Q) Practitioner. Non-descriptive titles (i.e. Job Titles with no specialisation or function included in the title) such as "Executive" or "Safety" should also be reviewed.
- A total of 583 workers were mapped to 121905 Programme or Project Manager. However, one Company in the FMCG sub-sector has mapped 147 workers to this occupation. Only 14 have "Project" in their Job Titles. This means that the reporting of Programme or Project Managers in the Chemicals Sector has to be reduced with 20% to 450 workers. The effect of this inconsiderate and incorrect mapping on Job Title usage across sub sectors is shown below:

Petroleum	41.0
FMCG	26.9
Pharmaceuticals	10.6
Base Chemicals	6.2
Explosives	4.8
Specialty Chemicals	3.6
Glass	3.3
Surface Coatings	2.9
Fertilisers	0.7



Petroleum	53.1
Pharmaceuticals	13.8
Base Chemicals	8.0
Explosives	6.2
FMCG	5.3
Specialty Chemicals	4.7
Glass	4.2
Surface Coatings	3.8
Fertilisers	0.9

- All 732 workers mapped to 121908 Quality Systems Manager should be reviewed and confirmed or considered for remapping. Less than half (44%) of the workers were mapped to this Occupation on the OFO are "manager" or "professionals" in terms of Equity level status. A further 40% are "skilled" and 16% are "semi- and unskilled" workers. The points listed below should assist in the mapping of workers to 121908 Quality Systems Manager on the OFO:
  - A new Occupation title related to manufacturing was added to the OFO, namely 132105 Manufacturing Quality Manager, who *Plans, organises, directs, controls and coordinates the performance of the quality management system, produce data and report on performance, measuring against set standards in the manufacturing industry*.
  - Quality is a function of most occupations. Most of the quality related jobs should thus be mapped to the occupation the practitioner stems from. Manufacturing Quality Managers manage the activities, criteria, parameters and processes required as part of quality monitoring from the various specialised occupations.
- The mapping of workers mapped to 122101 Sales and Marketing Manager and to 122102 Sales Manager should be reviewed and confirmed or considered for remapping. Only a quarter of these workers are "middle, senior or top" managers. This could be ascribed to the fact that many "professionals" with "Product"; "Brand"; "Category" and "Account" plus "Manager" in their Job Titles were mapped to 122101 Sales and Marketing Manager or 122102 Sales Manager. These workers could have been mapped to 243102 Marketing Research Accounts Manager / Key Account Manager / Market Research Analyst or to 243103 Brand Manager / Marketing Practitioner.
- Very few (6%) 317 workers were mapped to 122301 Research and Development Manager. It is assumed that many of the workers were mapped to this occupation merely because of the fact that they have "Research & Development" or "R&D" in their Job Titles. R&D is a function of most occupations, jobs related to R&D should thus be mapped to the specific occupation the employer stems from. The Research & Development Managers manage the activities of the specialists. One or two such posts are expected in a business unit.
- 132102 Production / Operations Manager (Manufacturing). This is a recently added Occupation to the OFO. Workers mapped to 121908 Quality Systems Manager in the 2013 WSP/ATR source data submission cycle could be considered for mapping to 132102 Production / Operations Manager (Manufacturing).
- 132104 Engineering Manager: few inconsistencies were noticed, however, the mapping of "skilled technical;" workers such as Maintenance Supervisor; Workshop Foreman; Maintenance Team Leader; Electrical Team Leader; and Facilities Maintenance Associate should be reconsidered.

- The demand for 134201 Medical Superintendent has to be confirmed or clarified. A Medical Superintendent p*lans, organises, directs, controls and coordinates medical programs and clinical services in a* ***hospital*** *or other* ***health service facility****; maintains standards of medical care and provides leadership to ensure an appropriately skilled medical workforce and contributes to health service planning*. It is assumed that most of the 74 workers mapped to Medical Superintendent as a result of key word searches. Most are Medical Advisor/Director/Manager and it is assumed these workers are qualified Medical Doctors *who provide advice on medical matters associated with the development of new treatments, established pharmaceutical products, and areas of unmet medical need*.
  - A new Occupation 213111 Pharmaceutical Physician is now added to the OFO, which can be used to map most of the workers that were mapped to 134201 Medical Superintendent in the 2013 WSP/ATR source data submission cycle.
- All workers mapped to 134902 Laboratory Manager should be reviewed and confirmed or considered for remapping.

Professionals

- 211301 Chemist: No mapping inconsistencies were noticed. The need expressed by CHIETA to map the Job Titles "Responsible Pharmacist" or "Regulatory Pharmacist" to this occupation should be clarified with industry experts. Only three workers entitled "Regulatory Chemist" were mapped to 211301 Chemist. No other workers with "Responsible" or "Regulatory" in their Job Titles were mapped to this occupation. "Responsible and Regulatory Pharmacists" were mapped to 226202 Industrial Pharmacist. See the comments on these workers under the discussion on 226202 Industrial Pharmacist below.
- 211301 Organic Chemist – Role should be clarified with industry experts.
- 211302 Pharmacovigilance Pharmacist – Role should be clarified. Note that 5 "Pharmacovigilence" workers were mapped to 213110 Medical Scientist.
- 211401 Geologist: no mapping inconsistencies noticed (all workers mapped here are called "Geologist".
- 211401 Shale Gas Exploration Experts: no workers with such a Job Title in the source data. It is assumed that expertise in horizontal drilling and hydraulic fracturing is sought after. It should be clarified with industry experts if this is indeed a specialisation under 211401 Geologist or rather under 214607 Petroleum Engineer.
- 212102 Petroleum Simulation Developer – Confirm with industry if this is a specialisation under 212101 Mathematician requiring a specific set of skills in numerical methods and computer programming (i.e. develop numerical simulations and draw conclusions based on the results of the equations that have been processed). Could they be Engineers solving complex mathematical problems and applying their knowledge of scientific phenomena, such as thermodynamics, fluid dynamics and quantum mechanics? Only one professional worker with "Simulation" could be found in the 2013 WSP/ATR source database. The "Process Simulation Engineer" was mapped to 214101 Process Engineer, an alternative title under 214101 Industrial Engineer.
- 212103 Statistician: 40 workers were mapped to this occupation, of who most have "Analyst" in their Job Title. However 6 "Diagnosticians" were mapped to 212103 Statistician. This should be clarified with industry experts. The term "diagnostician" is commonly used in the medical field to refer to a medical professional who specializes in **medical diagnostics**. In the Chemicals Sector the job may relate to an expert in **machinery lubrication**.
- 214101 Industrial Engineer: Review the mapping of other engineering specialisations (i.e. Chemical, Mechanical) to this occupation. It should be noted that "Process Engineer" is an alternative title under 214101 Industrial Engineer on the OFO. However, only 128 "Process Engineers" were mapped to this occupation. The rest were mostly mapped to 214501 Chemical Engineer, but also to 214103 Production Engineer; 214201 Civil Engineer; 214902 Explosive Ordnance Engineer; and 242102 Organisation and Methods Analyst.
- 213105 Biometrics Scientist: listed by CHIETA under 213105 Biotechnologist (but not an alternative title on OFO). Only 7 workers mapped to 213105 Biotechnologist, but no "Biometrics Scientist".
- 214301 Environmental Engineer: Only five workers mapped, including one "Technician" and one "Snr Technologist – Chemical" However, 12 professional workers with the Job Title "Environmental Engineer" was mapped to 214501 Chemical Engineer (1) and to 213302 Environmental Scientist (11).

- 214401 Mechanical Engineer: The mapping of several unskilled “Maintenance” workers to 214401 Mechanical Engineer should be revised.
- 214501 Chemical Engineer: The large number of workers with the Job Title “Process Engineer” in the Petroleum sub-sector mapped to 214501 Chemical Engineer should be confirmed. “Process Engineer” is an alternative title under 214101 Industrial Engineer on the OFO.
- 214501 Explosive Engineer: Consider mapping Explosive Engineer to 214902 Explosive Ordnance Engineer. Only 10 workers found with “Explosive” in their Job Titles. These workers were mapped to different occupations:
  - Six “Explosives Engineer” mapped to 214101 Industrial Engineer (1); 214502 Chemical Engineering Technologist (5).
  - One Explosives Technical Representative mapped to 214502 Chemical Engineering Technologist.
  - One Explosives Technician mapped to 214503 Explosives and Dangerous Goods Inspector.
  - Two Explosive Managers mapped to 214902 Explosive Ordnance Engineer.
- 214502 Chemical Engineering Technologist: Confirm the mapping of “Artisan Gr 1: Process” workers to this occupation.
- 215201 Electronics Engineer: reconsider “Technicians” mapped to this occupation.
- 221210 Specialist Physician (General Medicine): 38 Workers mapped. It is doubtful that they investigates and diagnoses internal human disorders and diseases, and administers treatment. It is assumed these workers are qualified Medical Doctors *who provide advice on medical matters associated with the development of new treatments, established pharmaceutical products, and areas of unmet medical need*. A new Occupation 213111 Pharmaceutical Physician is now added to the OFO, which can be used to map the workers that were mapped to 221210 Specialist Physician (General Medicine) in the 2013 WSP/ATR source data submission cycle.
- 225101 Veterinarian: Only four workers were mapped to this Occupation on the OFO. The demand for Veterinarians should be clarified with industry experts. Are the needed to diagnose, treat and prevent animal diseases, ailments and injuries or are their knowledge base needed to be applied in Chemical Sector jobs with Job Titles other than Veterinarian.
- 226202 Industrial Pharmacist: Note that a large number of “Regulatory Pharmacists” and “Regulatory Affairs Pharmacists” were mapped to 226202 Industrial Pharmacist. The titles “Responsible & Regulatory Pharmacist” and “Responsible Pharmacist” are also used. It is assumed that these workers have to ensure the appropriate licensing, marketing and legal compliance of pharmaceutical and medical products are in order to control the safety and efficacy of products and are tasked with *compiling and preparation materials and documentation for submission to regulatory authorities and assist in obtaining government approval for drugs, medical devices, veterinary products, cosmetics*, and foods. They are qualified scientists providing an administrative service. If this is the case, workers in such a job are called Regulatory Affairs Pharmacist; Regulatory Affairs Officer; Regulatory Affairs Administrator; or Regulatory Affairs Associate. These workers should be considered to be mapped to 242213 Regulatory Affairs Officer, a new addition to the OFO.
- 226202 Production Pharmacist: 131 “Production Pharmacists” consistently mapped to 226202 Industrial Pharmacist. Search results on job descriptions or vacancy adverts for “Production Pharmacist” indicate that “Production Pharmacist” is an alternative title for “Industrial Pharmacist”. It should be noted that “Production Pharmacist Assistants” were consistently mapped to 226203 Retail Pharmacist, which could be ascribed to the fact that “Pharmacist Assistant” is an alternative title for 226203 Retail Pharmacist on the OFO.
- 226203 Retail Pharmacist: The purpose of the Retail Pharmacist is to *dispense prescribed pharmaceuticals to the public, educate customers on health promotion, disease prevention and the proper use of medicines, and sell non-prescription medicines and related goods in a community pharmacy*. Therefore, the mapping of all 225 workers mapped to 226203 Retail Pharmacist should be reconsidered.
- 226203 Pharmacy Assistant: Pharmacist Assistant is an alternative title for 226203 Retail Pharmacist on the OFO, see comments made above. The role of and demand for “Pharmacy Assistant” must be clarified with industry experts.
- 226301 Environmental Health Officer: 70 workers were mapped to this occupation. The majority (70% or 49) of these workers have to be remapped to 226302 Safety, Health, Environment and Quality (SHE&Q) Practitioner.
- 226302 Safety, Health, Environment and Quality (SHE&Q) Practitioner: 923 workers were mapped to this occupation. The mapping of 201 (21%) of the workers that were mapped to 226302 Safety, Health, Environment and Quality (SHE&Q) Practitioner should be reviewed and confirmed or considered for remapping. Examples include workers with

"Manager" and "Quality Assurance/Controller" in their Job Titles as well as non-related Job Titles such as Business Analyst; Chemical Engineer; Hygienist; Occupational Health Nurse; Sales Manager and many more.

- 241107 Financial Accountant: 257 workers were mapped to this occupation. The mapping of 56 (22%) of the workers that were mapped to 241107 Financial Accountant should be reviewed and confirmed or considered for remapping. Examples include 20 workers with "Manager" or "Chief Finance" in their Job Title, 29 workers that could have been mapped to 331302 Accounting Technician and 7 workers that should have been mapped to 241102 Cost Accountant.
  - It has to be noted that at 15 workers with the Job Title "Financial Accountant" was mapped to either 241101 Accountant (General) or to 241102 Management Accountant.
- 242302 Enterprise Resource Planner (alternative title under 242302 Skills Development Facilitator): 42 workers were mapped to this Occupation on the OFO, none of which has the Job Title of "Enterprise Resources Planner". Skills Development Facilitators a*nalyse the skills requirements within an organisation and coordinate the execution of the personal development plans of employees and monitor the implementation of the workplace skills plan and report accordingly.*
  - However, the perceived demand for "Enterprise Resource Planners" should be clarified with industry experts. Are employers looking for Enterprise Resource Management Engineers (OFO Code 214101) or are they looking for Information and Communications Technology Professionals who can work with Enterprise Resource Planning (ERP) software that integrates various business functions (inventory and order management, accounting, human resources, customer relationship management) into one complete system to streamline processes and information across the entire organisation. If it is the latter then these workers could fall under 252301 Computer Systems Integrator on the OFO.
- 261101 Attorney: 26 Workers were mapped to this Occupation on the OFO. However, a large number of workers with "Professionally qualified and experienced specialist" Equity level status were mapped to 341110 Associate Legal Professional, which may point to incorrect mapping of a large number of workers with "Legal" in their Job Titles. It should be noted that (according to a Sasol vacancy advert) it is required of a "Specialist L&A: Legal SSS" to have *a LLB, BProc or equivalent qualification and be admitted as an Attorney or as GCB qualified Advocate in South Africa*. The mapping of these "Specialists" should be reconsider (e.g. mapped to 261101 Attorney).
- 261901 Intellectual Property Technical Advisor: Note that "Intellectual Property Advisor" is an alternative title for 261901 Adjudicator on the OFO. Adjudicators are **Legal Professionals** who *hear, study and settle cases by using judicial procedures*.
  - 19 workers were mapped to 261901 Adjudicator of which 10 are "IP Technical Advisors". The rest (9) have the Job Title "WCM Facilitator". WCM could refer to World Class Manufacturing and the "WCM Facilitators" could either be mapped to 214101 Industrial Engineer or to 132105 Manufacturing Quality Manager.
  - It has to be noted that 17 workers with Job Titles such as Intellectual Property Manager/Administrator/Assistant; IP Technical Advisor; and IP and Licensing Manager Technical Management were inconsistently mapped as 121902 Corporate Services Manager; 261101 Attorney; 261103 Patent Attorney; 261901 Adjudicator; 262202 Information Services Manager; or 411101 Administrative Assistant.
  - It seems more appropriate to map the above mentioned Job titles to 261103 Patent Attorney, who is also a **Legal Professional** that *establishes the originality of an invention, idea or design, drafting detailed technical descriptions and definitions and legal documents to secure a patent. Protects 'intellectual property' rights through the protection of inventions, designs, ideas and related issues such as copyright*. But from the discussion below, it can be seen that Intellectual Property Management Practitioners are not Legal Professionals.
- Intellectual Property Management (IPM) workers clarified: From vacancy adverts and job descriptions it is clear that Intellectual Property Managers (in the manufacturing industry) are not Legal Professionals. They are qualified Scientists (e.g. Chemists) or Engineers (e.g. Industrial or Chemical Engineers) that provide professional intelligence and policy research, advisory and administrative services with regard to intellectual property rights, trademarks and patent registration, for example:
  - International job description: The Intellectual Property Manager works with a team of multi-disciplinary scientists and engineers within new the product development department of an organisation. They must liaise with product marketing and various external agencies in order to form appropriate Intellectual Property strategies. Qualification requirements include Finance; Industrial Engineering; International Business Management; and or Political Science.

- Local vacancy advert from a Company in the Petroleum sub-sector: The IP Technical Advisor integrates expert technology appreciation and IP management principles to develop and execute IP strategies that enable technology and business objectives. The job's main focus is; i) actionable intelligence from IP landscapes to influence technology and business strategies in core technology areas, ii) the IP protection of the Company's technology position and competitive advantage and iii) identification of 3rd party IP threats that may prevent the Company to commercialise current and future technologies. One of the outputs expected from the IP Technical Advisor is to serve as *IP Technical Consultant to the Legal Advisor in the drafting of patent specifications and in patent prosecution matters*. Required qualifications ("must"): M.Sc. (Chemistry) or B.Sc. Eng (Chemical) and "preferred": A Ph.D. will serve as a strong recommendation.

- Biometrics Scientist: A Job Title perceived to be "CORE" to the Chemicals Industry and suggested as alternative title under 213105 Biotechnologist on the OFO. However, it has to be noted that only seven workers were mapped to 213105 Biotechnologist. Furthermore, no workers could be found in the WSP/ATR source data submitted in 2013 with "Biometric" in their Job Titles. Biometrics (or biometric authentication) refers to the identification of humans by their characteristics or traits. Biometrics is used in computer science as a form of identification and access control. Most vacancy adverts (all international) for Biometric Scientists are requiring qualifications/experience in/as: 215201 Computer Engineer/Electronics Engineer or 215101 Electrical Engineer. The demand for Biometric Scientists has to be clarified with industry experts.

Technicians and Associate Professionals

- CET Technicians are inconsistently mapped to either 311101 Chemistry Technician or to 311601 Chemical Engineering Technician.
- "Process Technician" mapped to 311101 Chemistry Technician; 311601 Chemical Engineering Technician; 311904 Manufacturing Technician; 312201 Production / Operations Supervisor (Manufacturing); 313301 Chemical Plant Controller; 313501 Metal Manufacturing Process Control Technician; and 313901 Integrated Manufacturing Line Process Control Technician.
- "Laboratory Technician" and "Laboratory Analyst" were mapped across different Major Occupation groups on the OFO, including Professionals; Clerical Support Workers; Plant and Machine Operators and Assemblers and Elementary Occupations.
- Apart from 311101 Chemistry Technician and 311102 Physical Science Technician, "Laboratory Technician" also mapped to 311401 Electronic Engineering Technician; 311702 Metallurgical or Materials Technician; and 311904 Manufacturing Technician.
- Apart from 311101 Chemistry Technician and 311102 Physical Science, "Laboratory Analyst" also mapped to 311905 Industrial Engineering Technician; 313201 Water Plant Operator and 334102 Office Administrator.
- Apart from 311101 Chemistry Technician "Instrument Technicians" are also mapped to e.g. Electrical Engineering Technicians and Mechanical Engineering Technicians and should be reviewed for mapping correctness.
- The use and mapping of "Laboratory Assistant" should be clarified: 175 workers were mapped as Chemistry Technicians of which 137 are Semi- and Unskilled. Could they be workers who have to ensure cleanliness of the laboratories and pilot plant, receive laboratory supplies and coordinate waste disposal? If so, they could have been mapped to 811202 Healthcare Cleaner who cleans floors and above the floors in all risk areas, disposes of hazardous waste, cares and cleans medical instruments and equipment in hospitals, clinics, frail care centres and other health related institutions.
- Physical Science Technicians are not on the CHIETA "PIVOTAL:" Occupations list, however 283 workers were mapped to Product Quality Laboratory Technicians (a specialisation under 311102 Physical Science Technicians). It seems as if workers were mapped to Physical Science Technicians as a result of a keyword search for "quality" and "laboratory" and "technician" Product Quality Laboratory Technician.
- A third (35.7%) of the 283 workers that were mapped to Product Quality Laboratory Technician are employed in the Pharmaceuticals sub-sector and two-thirds (64.3%) across the other sub-sectors in the Chemical Sector.

- Persons responsible for Job Title-to-OFO Occupation Tile mapping should reconsider the mapping of Laboratory Technician; Laboratory Assistant and Quality Assurance/Control/Inspection related titles (i.e. could they be Chemistry Technicians?).
- It should be noted that the Job Title "PLC Programmer" is considered to be "CORE" to the Chemical Sector and a specialisation occupation under 311401 Electronic Engineering Technician on the OFO. However, no "PLC Programmer" could be found in the 2013 WSP/ATR source database. 16 workers with "PLC" in their Job Titles were mapped as Professionals; Technicians or Machine Operators. "PLC Operators" are inconsistently mapped either as "Controllers" (i.e. as Chemical Plant Controllers) or as Machine Operators.
- Only 2 CNC Programmers were mapped to 311401 Electronic Engineering Technician, while 6 workers with this Job Title could be found in the 2013 WSP/ATR source database, 2 were mapped to Manufacturing Technician, 1 to Turner Machinist and 1 to Glass Production Machine Operator.
- The OFO Occupation 311904 Manufacturing Technician seems to be a "catch all" for workers with non-descriptive titles, such as "Analyst" "Process Technician"; "Technician"; "Machine Operator"; "General Worker" and "Factory Assistant".
- Industry Experts (per sub-sector) will have to clarify or confirm the variety of Job Titles mapped to 312201 Production Supervisor (Manufacturing), which include the titles listed below:
  - Manager
  - Superintendent
  - Team Leader
  - Foreman
  - Charge hand
  - Supervisor
- It is doubtful that 313104 Nuclear Power Plant Process Controllers are critical, and closely related to the Chemical Sector (i.e. rather to Energy Sector). Only one company in the Base Chemicals sub-sector has used this OFO Occupation Title to map 96 workers. However, the knowledge base of qualified Nuclear Power Plant Process Controllers may be needed in the Base Chemicals sub-sector. If the case is that workers are needed to *monitor radiation safety compliance and control and process radioactive materials and radiation generating equipment*, they can be mapped to a new addition to the OFO, namely 311103 Radiation Control Technician / Nuclear Monitoring Technician.
- A large number of "Operators" mapped to 313301 Chemical Plant Controller or to 313401 Gas or Petroleum Controller.
- It is doubtful that 321117 Radiation Laboratory Technicians are "CORE" to the Chemical Sector. No workers were mapped to this occupation. However, if workers are needed to *monitor radiation safety compliance and control and process radioactive materials and radiation generating equipment*, they can be mapped to a new addition to the OFO, namely 311103 Radiation Control Technician / Nuclear Monitoring Technician.
- Employers in the Pharmaceuticals sub-sector seem to be in dissension about the use of 321301 Pharmaceutical Technician with regard to which Job Titles should or can be mapped to this occupation.
- It is doubtful that 324101 Veterinary Nurse is perceived as a "CORE" occupation in the Chemical Sector. People in this occupation provide veterinary clinical care and animal husbandry services. However, the knowledge base of qualified Veterinary Nurses may be needed in the Pharmaceuticals sub-sector, for example as Sales Representatives.
- It seems as if the decision to map Job Titles to 325201 Health Information Manager was in most (if not all) cases based on the fact that the workers in these Jobs are doing clerical, administrative or records management work.
- It has to be noted that 36 (of the 46) workers mapped to 325701 Environmental and Occupational Health Inspector have the non-descriptive Job Title of "Inspector". The rest (44 of the total of 83) "Inspectors" in the 2013 WSP/ATR source database were mapped to Agricultural / Horticultural Produce Inspector; Boilers and Pressure Vessels Inspector; Gas or Petroleum Controller; Mechanical Engineer; Production / Operations Supervisor (Manufacturing) and Safety Inspector.
- The fact that 333903 Sales Representative (Business Services) is considered "CORE" to the Chemical Sector should be clarified and confirmed with sub-sector practitioners. The "representatives" mapped to Sales Representative (Business Services) could be 332207 Chemical Sales Representative or 332203 Sales Representative.

- It is understandable that the management of infestations by pests in laboratories and warehouses is important to the sector, and may be considered a "PIVITOL" occupation. However only one company in the Speciality Chemicals sub-sector has mapped 119 workers to 335904 Pest Management Officer.
- The large number of workers with "Professionally qualified and experienced specialist" Equity level status mapped to 341110 Associate Legal Professional may point to incorrect mapping of a large number of workers with "Legal" in their Job Titles. It should be noted that (according to a Sasol vacancy advert) it is required of a "Specialist L&A: Legal SSS" to have a LLB, BProc or equivalent qualification and be admitted as an Attorney or as GCB qualified Advocate in South Africa. The mapping of these "Specialists" should be reconsider (e.g. mapped to 261101 Attorney).

Clerical Support Workers

- 432102 Dispatching and Receiving Clerk / Officer: 1048 workers were mapped to this Occupation on the OFO. The mapping of 351 (33%) of the workers that were mapped to 432102 Dispatching and Receiving Clerk / Officer should be reviewed and confirmed or considered for remapping.
- 432103 Order Clerk / Officer: 180 workers were mapped to this Occupation on the OFO. The mapping of 61 (33%) of the workers that were mapped to 432102 Dispatching and Receiving Clerk / Officer should be reviewed and confirmed or considered for remapping.
- It is important to notice that a total of 3098 workers were inconsistently mapped across the four OFO Occupations listed below. Persons responsible for Job Title-to-OFO Occupation mapping should ensure that workers are fittingly mapped to an Occupation Title as per the outputs defined in broad terms in the descriptor as found on the OFO.
  - 432101 Stock Clerk
  - 432102 Dispatching and Receiving Clerk
  - 432103 Order Officer
  - 432104 Warehouse Administrator
- 432201 Production Coordinator: 2003 workers were mapped to this Occupation on the OFO. At face value it seems as if 432201 Production Coordinator is a "catch-all" OFO title used for "Planner"; Foreman: "Leader"; or Shift", all of which are to be found in the alternative titles and specialisations under 432201 Production Coordinator.
- 441903 Program or Project Administrators: 507 workers were mapped to this Occupation on the OFO. No mapping inconsistencies

Service and Sales Workers

- 522301 Sales Assistant (General): 620 workers were mapped to this Occupation on the OFO. No inconsistencies were noticed that can be reported.
- 542305 Engineer Soldier: Considered to be in demand in the Chemicals Sector. However, no workers with the Job Title "Engineer Soldier" or "Soldier" could be found in the 2013 WSP/ATR source database. The demand for 542305 Engineer Soldier has to be confirmed or clarified with industry experts.

Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers

- It has to be highlighted that a total of 309 workers with the Job Title "Fitter" were mapped to 11 different occupations, for example: Carpenter and Joiner; Electrician; Fitter and Turner; Fitter-welder; Gas Practitioner; General Fitter; Gunsmith; Mechanical Fitter; Metal Machinist; and Pipe Fitter. The function/specialisation of these workers has to be reviewed and confirmed or considered for remapping.
- Notably, companies in the Glass sub-sector map "Fitter: Cold End" to three occupations, namely: 652301 Metal Machinist; 652302 Fitter and Turner and to 653303 Mechanical Fitter.
- Only 14 workers were mapped to the perceived "CORE" occupations of 642701 Air-conditioning and Refrigeration Mechanic (10 workers) and 642702 Refrigeration Mechanic (4 workers). The reasons for why these two occupations are considered critical to the Chemicals Sector should be clarified or confirmed with industry experts.

- The reasons for why 643202 Vehicle Painter is considered a "CORE" occupation should be clarified or confirmed with industry experts. Only 12 workers were mapped to this occupation. 10 of these workers are employed by one Company in the Glass sub-sector. According their Job Titles these workers are employed either as "Paint Technician" or as "Paint Preparation". The only two other workers mapped to 643202 Vehicle Painter have the Job Title of "Spraypainter".
- Only 10 (of the 71) workers mapped to 651203 Fitter-welder have the Job Title "Fitter / Welder". Industry Experts (per sub-sector) will have to clarify or confirm the variety of Job Titles mapped to 651203 Fitter-welder.
- "Cutter" workers in one Glass sub-sector Company were mapped to 652201 Toolmaker based on a keyword search for "cutter" which resulted in the acceptance of "Die Cutter", which is an alternative title on the OFO under 652201 Toolmaker. The effect of this inconsiderate mapping is that an analysis of the demand for Toolmakers across the different sub-sectors in the Chemicals Sector will show that the Glass sub-sector is the biggest employer of Toolmakers.
- All workers with "Operator" in their Job Title that were mapped to 652301 Metal Machinist should be checked if they were correctly mapped to 652301 Metal Machinist.
- The non-descriptive Job Title of "Machinist" is mapped to 652301 Metal Machinist; 671202 Millwright and to 672104 Electronic Equipment Mechanician. The function/specialisation of these workers has to be reviewed and confirmed or considered for remapping.
- The mapping of half (47,8%) of the 1107 workers that were mapped to 652302 Fitter and Turner has to be reviewed and confirmed or considered for remapping.
- It has to be highlighted that one Company in the FMCG sub-sector has mapped all (174) Skilled Agricultural, Forestry, Fishery, Craft and Related Trades Workers in that Company to 671202 Millwright. Only 37 of these workers are "Millwrights".
- Only six workers were mapped to 672107 Special Class Electrician (which is perceived as a "CORE" Occupation).

Plant and Machine Operators and Assemblers

- 711301 Driller: 39 workers were mapped to this Occupation on the OFO. No inconsistencies were noticed that can be reported.
- 713101 Chemical Production Machine Operator: 10489 workers were mapped to this Occupation on the OFO. The mapping of 1188 (11%) of the workers that were mapped to 713101 Chemical Production Machine Operator should be reviewed and confirmed or considered for remapping. Perceived inconsistencies relate to workers with "Maintenance"; "Process Controller"; or "Technician" in their Job Titles. The mapping of 282 "Line Operators" should be confirmed or considered for remapping to 718303 Filling Line Operator. Other "obvious" incorrect mappings include Job Titles such as Accounts Payable Supervisor; Blaster; Cleaner/Admin Clerk; Diesel Mechanic; Laboratory Technician; Machinist and Welder.
  - It should be noted that 4 "Compounder" workers (FMCG) and 5 "Compounding Operator" workers (Pharmaceuticals) were mapped to 713101 Chemical Production Machine Operator. A further 57 "Compounder/Compounding" workers (in FMCG, Specialty Chemicals and Pharmaceuticals) were indiscriminately mapped across five different OFO Occupations.
  - Furthermore, it will be seen under the *Elementary Occupations* section below that 64 "Compounder" workers were mapped to either 862915 Chemical Mixer or to 832907 Chemical Plant Worker.
  - The "Compounder/Compounding" concept and the outputs expected of these workers have to be clarified and outlined by industry experts.
- 718102 Glass Production Machine Operator: 1148 workers were mapped to this Occupation on the OFO. Very few mapping inconsistencies were noticed. However, the mapping of 53 (5%) of the workers that were mapped to 718102 Glass Production Machine Operator should be reviewed and confirmed or considered for remapping. Perceived inconsistencies relate to workers with "Technician: Process" and "Warehouse" in their Job Titles. Other Job Titles to reconsider include CNC Operator; CNC Programmer and Cutter.
- 718302 Packing Machine Operator: 714 workers were mapped to this Occupation on the OFO. The mapping of 479 (67%) of the workers that were mapped to 718302 Packing Machine Operator should be reviewed and confirmed or considered for remapping. Perceived inconsistencies relate to workers with non-descriptive Job Titles such as

"Operator" or "Machine Operator". The mapping of 9 "Line Operators" and of 14 "Filling Machine Operators" should be confirmed or considered for remapping to 718303 Filling Line Operator.

- 721101 Machinery Assembler: 69 workers were mapped to this Occupation on the OFO. The mapping of 37 (54%) of the workers that were mapped to 721101 Machinery Assembler should be reviewed and confirmed or considered for remapping. Most of the perceived incorrect mapping relate to 27 Fitters (Fitter: Maintenance / Relief Shift / Shift / Services / Level 3) and 7 Artisans (Chief/Senior). Other "obvious" incorrect mappings include Job Titles such as Reliability Technician and Boilermaker.
- 721901 Product Assembler: 253 workers were mapped to this Occupation on the OFO. The mapping of only five workers should be reviewed and confirmed or considered for remapping, namely one "Lab Assistant; one "Cosmetic Compounder" and two workers with the Job Title of "Operator II".
- It should be noted that there are 824 Electromechanical Equipment Assemblers (OFO Code 721201) in the data of workers mapped to OFO Major Group 7: Plant and Machine Operators and Assemblers.
- 733201 Truck Driver (General): 1514 workers were mapped to this Occupation on the OFO. The mapping of 678 (55%) of the workers that were mapped to 733201 Truck Driver should be reviewed and confirmed or considered for remapping. The perceived inconsistencies relate to the 513 workers with the non-descriptive Job Title of "Driver"; and workers with Job titles such as: Bakkie Driver; Warehouse Assistant; Driver (Forklift); Driver (Assistant); Plant, Machine Operator; Clerk: Receiving & Dispatch; Driver - Light Vehicle; Driver - Code 8; and Tanker Driver. Note that 80 "Bulk Vehicle Operators" were mapped to 733204 Tanker Driver (see below).
- 733204 Tanker Driver: 936 workers were mapped to this Occupation on the OFO. The Job Titles of 163 of these workers are "Tanker Driver"; "Bulk Vehicle Operator" or "Bulk Tanker Driver". The mapping of 553 workers with the non-descriptive Job Title of "Driver" should be reviewed and confirmed or considered for remapping. The following Job Titles should also be reviewed: Delivery Clerk; Delivery Technician; Despatcher (sic); IM Plant Pump and Road Tanker Specialist; and Tank Operator.
- 733208 Mobile Mining Equipment Operator: 164 workers were mapped to this Occupation on the OFO. No inconsistencies were noticed that can be reported.
- 734301 Crane & Hoist Operator: 76 workers were mapped to this Occupation on the OFO. No inconsistencies were noticed.
- 734303 Dredge Operator: 10 workers were mapped to this Occupation on the OFO. No inconsistencies were noticed.
- 734402 Forklift Driver: 902 workers were mapped to this Occupation on the OFO. Few inconsistencies were noticed; however, the mapping of 71 workers should be reviewed and confirmed or considered for remapping. Examples of Job Titles that may be incorrectly mapped to 734402 Forklift Driver include "Tractor Drriver" (sic); "Hazardous Materials Operator"; "Packaging Operator" and "Driver / Messanger" (sic).
- It should be noted that 108 Forklift Drivers were mapped to occupations other than 734402 Forklift Driver:
  - 713101 Chemical Production Machine Operator
  - 714205 Reinforced Plastic and Composite Production Worker
  - 718303 Packer (Non Perishable Products)
  - 718304 Packaging Manufacturing Machine Minder
  - 731101 Train Driver
  - 732101 Delivery Driver
  - 733101 Bus Driver
  - 733201 Truck Driver (General)
  - 734206 Loader Operator

Elementary Occupations

- 832907 Chemical Plant Worker: 3865 workers were mapped to this Occupation on the OFO. The OFO Occupation 832907 Chemical Plant Worker seems to be a "catch all" mapping solution for Elementary workers in companies across all nine sub-sectors in the Chemicals Sector. The mapping of workers with non-descriptive Job Titles, such as General Worker; Factory worker; Team Member; or Assistant should be reviewed and confirmed or considered for remapping. Job Titles such as Tea maker; Drivers assistant; Messenger; Assembler; Handyman Maintenance/Warehouse assistant; and Microbiologist should be remapped to the appropriate OFO Occupation.
    - It should be noted that 64 "Compounder" workers were mapped to either 862915 Chemical Mixer or to 832907 Chemical Plant Worker.
    - Furthermore, it was mentioned under the *Plant and Machine Operators and Assemblers* section above that 66 "Compounder/Compounding Operator" workers were indiscriminately mapped across six different OFO Occupations.
    - The "Compounder/Compounding" concept and the outputs expected of these workers have to be clarified and outlined by industry experts.
- 832910 Auto glass fitter: 110 workers were mapped to this Occupation on the OFO. No inconsistencies were noticed.
- 862202 Handyperson: 673 workers were mapped to this Occupation on the OFO. The Job Title of 382 of these workers is indeed Handyperson/Handyman. Middle Management, Professional and Skilled technical workers with non-descriptive titles such as Maintenance, Technician and Artisan that were mapped to 862202 Handyperson should be considered for remapping
- 862918 Electrical or Telecommunications Trades Assistant: the mapping of 133 (78%) of the 171 of the workers that were mapped to this Occupation on the OFO have to be reviewed. Most of these workers have the non-descriptive Job Title of Artisan Assistant, but some of the Artisans mapped to 862918 Electrical or Telecommunications Trades Assistant are "Master" or "Senior" Artisans and are classified as skilled technical and professionally qualified workers. Examples of specific Job titles that have to be remapped include: Draghtsperson (sic), Engineering Craftsman, Chem Lab Assistant (sic); Remediation Artisan and Civil Artisan.