Measuring Occupational Change in the Insurance Sector: approaches, methods and processes

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EXECUTIVE SUMMARY

There is consensus that the nature of work is undergoing rapid change, leading to changes in jobs and occupations. Therefore, understanding the changing nature of work, jobs and occupations is fundamental to human and economic activities. 4IR is the major disruptor to the traditional insurance value chain, as indeed all other economic sectors. The new technologies are creating a massive disruption to jobs and occupations.

Friedman describes **four** ways in which jobs and occupations are changing. First, a person requires **more** knowledge and skills to perform the same job or occupation (upskilling). Second, a person requires **less** knowledge and skills to perform the same job or occupation (deskilling). Third, skilled parts of the job or occupation require **more** knowledge and skills, and unskilled parts require **less** knowledge and skills (apart). Fourth, outsourcing and automation will compete successfully **for more work** and bigger portions of jobs.

It is necessary to conduct an occupational analysis to measure occupational change. The subject matter expert (SME), or occupational analyst, selected for the analysis should have a diverse background, representing all aspects of the occupation. An occupational analysis typically requires more information than a job analysis, such as forecasts of future hiring outlooks, career pathways, education and credentialing requirements. An occupational analysis typically offers a complete picture of the work involved than that of a job analysis. An occupational analysis can be used for a wider range of purposes than a job analysis.

Arguably, the most widely recognised force shaping work and occupations is *technology*. Several investigators argue that that technology is changing the nature of work and the way we work largely through digitalisation and artificial intelligence, which are also driving forces of the fourth industrial revolution.[1]

They observe that the technology is driven by mobile connectivity, artificial intelligence, Big Data, the Internet of Things (IoT), next-generation robotics, additive manufacturing (three-dimensional printing), blockchain software, wearable technologies and machine learning. The explosion of digital telecommunications evidenced by the unprecedented growth of the Internet and the World Wide Web has brought the world to the verge of a transformation similar to the second industrial revolution.

Today, businesses need workers to focus on the non-routine, complex and ambiguous work that requires their uniquely human skills of creativity, communication, collaboration, empathy and judgment. The most valuable workers will be those who create value on the job, relying on an entrepreneurial outlook, a beginner's discovery and an inquiring mind. These workers are best suited to turn insights into new opportunities, a capability we have yet to see put to any job description.

[1] Rasool, H (2019). The Fourth Industrial Revolution and its Implications for the Insurance Sector, September. A paper for the INSETA.
Accenture (2018) The future workforce survey: insurance. Accenture: UK.
Deloitte (2018) The Future of Talent in Insurance. Deloitte: Dublin.

As a start, it is necessary to understand and consider the full range of forces that shape work and how these forces are changing. It would enable organisations to describe better and track the nature of work, and possibly gain greater control over how people work.

The "nature of work," usually refers to four modalities of work activity:

- What people *do* for a living.
- The *content of work* or how people do what they do: the techniques, technologies, and the skills they employ.
- The *organisational, social and institutional contexts* in which work takes place.
- *Work affects and relates to other aspects of daily life— families, relationships, community life, motivation, self-esteem, social status, etc.*

INSETA should consider the following recommendations:

Developing skills to measure occupational change: Workshops should be held with insurance companies to present the occupational change toolkit. Companies should be encouraged to use the toolkit and record findings of occupational change.

Measuring occupational change for existing and new qualifications: There should be a study to measure occupational change before developing new qualifications and revising existing ones that apply to designated occupations. These findings should inform the qualification development process.

Expanding short courses: There should be an increasing focus on short courses and micro-learning to enable employees to keep abreast with changes in the work settings and external environment.

Focus on a limited number of occupations: INSETA should identify and focus on measuring the occupational change in a limited number of key occupations in the sector, instead of all occupations. These key occupations should be identified from the Sector Skills Plans and consultations with stakeholders.

Work analysis of the impact of technology: The impact of technology on occupations in the sector should be analysed and fed into qualification development.

PESTEL Analysis: The INSETA Research and Development Committee should be given the task of overseeing the following:

- Review and analyse the PESTEL forces that contribute to understanding the nature and structure of work, jobs and occupations.
- Identify key issues in the changing context and content of work that affect the design of occupations.

- Evaluate the changes in the tools for analysing the nature of the work environment and developing occupational profiles that are responsive to the workplace's current and future needs.
- Assess the application of methods and tools developed to measure occupational change.

Reimagining work: New skills, new roles, and new ways of working will be needed. Three steps will be essential for creating the insurance workforce of the future:

Step 1: Reimagine work to understand better how machines and people can collaborate.
Step 2: Pivot the workforce to areas that create new forms of value.
Step 3: Scale-up 'new skilling' to enable people to work with intelligent machines.

Map skills to new roles: Once there is a full list of required tasks, skills and newly defined roles, it can be mapped to the list against the skills present in your workforce. The gaps can be addressed through training or sourcing, including drawing on contract workers in the short-term.

Digital Platform: The occupational change templates should be available to all companies in the insurance sector on a digital platform for ease and speed.

1. INTRODUCTION

There is consensus that the nature of work, jobs and occupations is undergoing rapid change. Traditional job descriptions and occupational profiles do not comport with changes in work settings.

Therefore, understanding the changing nature of work, jobs and occupations is fundamental to human, social and economic development. Organisations need to be productive and profitable; employees to know what they should do, and how it contributes to business goals; policy-makers to make smart decisions on public education and training investments; training institutions to develop curricula and offer programmes that meet industry needs; educators to prepare people for the workplace and advise them about career choices; and managers to shape the institutional context in which people work.

Political, economic, social, technological, environmental and legal (PESTEL) forces drive change in the workplace. These forces influence the content and structure of work, jobs and occupations. They create pressures for organisational restructuring, business re-engineering and change in employment relationships. The content and structure of work, jobs and occupations, in turn, dictate the knowledge and skills requirements of employees.[2]

The fourth Industrial Revolution (4IR or Industry 4.0) is the major disruptor of the traditional insurance value chain. Technological advancements such as mobile connectivity, artificial intelligence, Big Data, the Internet of Things (IoT), robotics, blockchain, cryptocurrencies, next-generation software, drone technology, wearable devices and machine learning are breaking down the centuries-old edifice on which the traditional insurance model was built.

It has compelled the insurance sector, which consists of reinsurers, insurers, financial service providers, intermediaries, regulators, employees, training providers and clients to revisit the traditional insurance business model. Also, the COVID-19 pandemic has quickened the pace of disruption in the insurance sector.

These developments are leading to significant changes in the insurance sector. The changes include developing new business models, organisational re-engineering, flatter hierarchies, smarter insurance products, faster business processes, stronger regulations, client power, multiple marketing and distribution channels, new clientele, and the latest deployment technologies.

New technologies are creating a massive disruption to jobs and occupations. New jobs and occupations are emerging, and existing jobs and occupations are changing in the insurance sector. Technology is a prime mover in changing the nature and content of work in the sector. Old skills are becoming obsolete, and new skills gaps are emerging. New training programmes are required to equip employees for a changing business world. For example, for students

[2] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois.

starting a four-year degree, half of what they learn in the first year will be outdated by their third year of study.[3]

An *Oxford University White Paper* (2013) forecasts that 47% of jobs or occupations could be eliminated by smart technology during the next two decades and a *McKinsey Report (2017)* predicts that 49% of the time spent working could be eliminated by technology. In PWC's *Workforce of the Future (2018),* 37% of respondents were concerned that automation is putting jobs at risk.[4]

Technology is not the only factor that is disrupting jobs and occupations. The heterogeneity of employees, work and the workplace is impacting on jobs and occupations.

First, the workforce is becoming diverse concerning gender, race, religious beliefs, culture, class, education and immigrant status.

Second, the boundaries between who performs what jobs and the employment outcomes and experiences of individuals working in different occupations are fluid. The evidence suggests that the insurance sector is employing a variety of workers and skills to accomplish their goals. For example, there is a growing number of information technology (IT) professionals in the insurance sector due to companies transitioning to leaner business models.

Third, there are choices about how work is structured, which is interdependent with jobs and occupations.

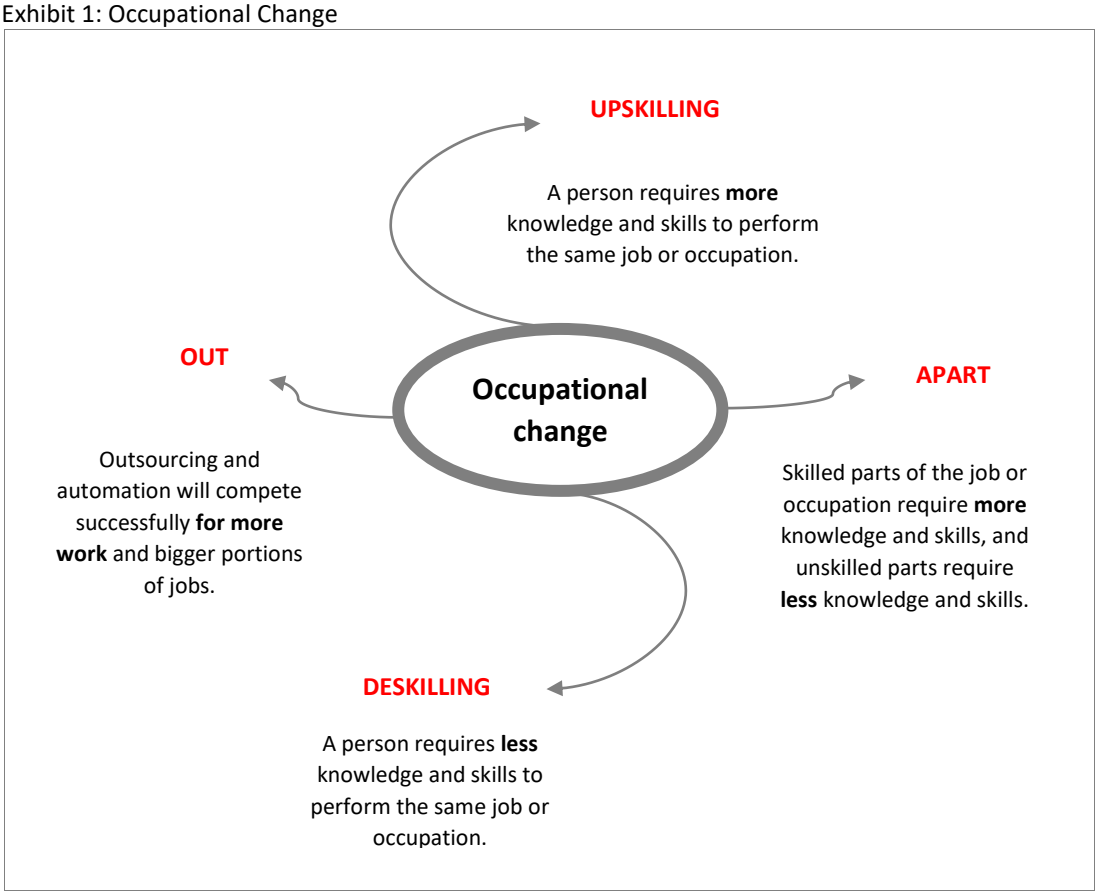
Fourth, there is an interrelationship of changing markets, demographics, technologies and human behaviour. Therefore, it requires an integrated, systematic approach to understanding how the context of work is changing and the implications of these changes.

[3] Friedman, T (2016) Thank you for being late: an optimist's guide to thriving in an age of acceleration. Farrar, Straus and Giroux: USA.

[4] Iny, D (2018) Leveraged learning; how the disruption of education helps life-long learners and experts with something to teach. Ideapress Publishing: USA.

Friedman describes four ways in which jobs and occupations are changing:[5]

Exhibit 1: Occupational Change



Source: Friedman (2016)

The implications of work and occupational change are profound. There is diversity in the structure of work, jobs and occupations. The rise of atypical employment and gig work is a growing trend. There are also more ways of performing tasks. Th e organisational structure, task differentiation and jobs are blurred.

Narrow routine, task-related jobs are giving way to new occupations. Management layers are being cut out, leading to flatter hierarchies and wider spans of control. Traditional boundaries around jobs, such as the distinction between managerial and production work, white-collar and blue-collar jobs, the barriers around craftwork, and the narrow job descriptions of production jobs associated with scientific management have blurred.

[5] Ibid.

The employment relationship, defined as the set of mutual obligations and expectations between employer and employee, has weakened. Expectations seem to have moved toward more transient relationships.

Jobs and occupations are also shaped by occupational analysis methods and tools to describe and measure the structure, content, tasks, competencies, knowledge, and skills of jobs and occupations. These methods and tools should be updated frequently to keep pace with changes in the workplace. Methods and tools should be forward-looking and adaptable. Without a system to analyse occupational change, it will be difficult to know whether occupations are changing until the change is completed. At which point attempts to fashion the change are moot.[6]

The increasing prevalence of knowledge work makes occupational change critical. Organisations face the challenge of documenting these new work practices, often involving problem-solving, judgment, decision-making and critical analysis skills.

The research team is cautious about making definitive statements on unidirectional trends such as technological advancement signalling the end of jobs. Our research shows increased variance in occupations and jobs. It implies that the future of jobs will not be determined solely by the forces of technology, demographics, or markets but by the interaction of these forces with the strategies, missions, organisational structures, and employment policies that decision-makers implement in specific settings. The history of technology repeatedly shows that, even when large numbers of individual workers are driven from particular jobs due to a shift in the demand for labour, aggregate demand for workers does not decline because of technological changes.

2. KEY CONCEPTS

There is ambiguity in the meaning of key terms such as jobs, occupations, careers, skills, work, tasks and competencies in labour market narratives. Dissimilar meanings to the same term or the same meaning to different terms are attached, which obfuscates consistent deliberation of skills and the labour market economy. It also creates confusion in the policy-making process.

Therefore, it is imperative to specify the meanings of key terms used in this study and delineate associated terms' nuances. By underpinning the study within a reference frame, the risks of ambiguities, unhealthy debates and misunderstanding are effectively eliminated from the discourse.

It is not possible to research occupational change without other terms that contribute to its definition. The meaning of key terms such as work, task, skill, job, occupation, occupational classification system and career are explained.

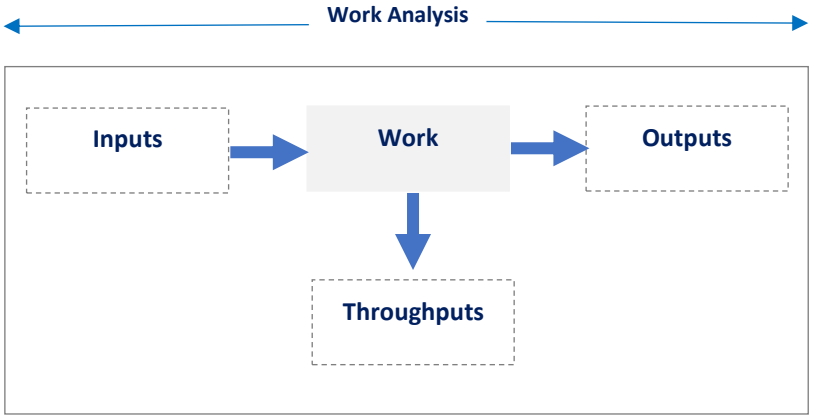
[6] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois.

Work

Work is defined here as *"any purposeful activity that that uses the individual's cognitive, physical, and affective abilities to provide a livelihood"*. Simply, *"work is what people do when they are employed and receive compensation for what they do"*.[7]

Work is a process that requires inputs such as resources, labour, intellectual capital and facilities. The performance outcomes that occur during the work process are referred to as throughputs, while those that occur at the end of the work process are labelled outputs.

Exhibit 2: Work Analysis



Work analysis is a method of examining the work process. It involves deconstructing work activities or taking it apart so that its various sub-activities are examined. It is also referred to as work-study.

Task

A "task" is *"an assigned piece of work to be finished in a certain time."*[8] Tasks are the individual units of work activities. Tasks are the building blocks for skills formation, jobs and occupations.

[7] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois.

[8] Accessed at: https://www.merriam-webster.com/dictionary/task

Skill

A "skill" is the ability to carry out a task as per the work specification or work standard. A skill implies individual competency and “know-how”. In today's work environment, virtually all jobs require a skills set.

There are various typologies used to describe skills. For this study, s*kills* are grouped into six categories. The first is *basic* skills—developed cognitive capacities that allow for learning or knowledge acquisition. Basic skills are divided into *content skills*, such as reading, listening, oral and written communication, and declarative knowledge, such as mathematical procedures, and *process skills*, such as critical thinking, learning strategies, and application of principles. The remaining five categories are termed *cross-functional skills*, skills that facilitate performance across a variety of settings. They include problem-solving, social skills, technological skills, system skills and resource management skills. The occupation-specific skills of each occupation must also be considered. They facilitate work across a variety of settings.[9]

The level of skills are measured by:

- The nature of the work performed (i.e. the complexity and range of work) in an occupation to the specified tasks.
- The level of formal education required for task competence.
- The amount of on-the-job training and previous experience in a related occupation.[10]

According to Blackmore[11], the term “skills” is used as frequently as the term “competence”.

Occupational analysts use the term “skills” to look at broader human capacities. These general abilities are used in various situations. This tends to yield fewer and more generic characteristics or, as they have been termed “soft skills”.[12] Eraut[13] uses the term "generic competences" to distinguish between task analysis, on the one hand, and skills analysis, on the other. Whereas the term “task” refers to the job to be done, "skills" refer to the human capacities required.

[9] National Research Council, 1999. *The Changing Nature of Work: Implications for Occupational Analysis*. Washington, DC: The National Academies Press. https://doi.org/10.17226/9600.

[10] Department of Higher Education and Training (2015). *Guidelines: Organising Framework for Occupations (OFO)*. Pretoria: DHET.

[11] Paul Blackmore (1999) A categorisation of occupational analysis approaches, Journal of Vocational Education and Training, 51:1, 61-78, DOI: 10.1080/13636829900200071. Accessed at: https://doi.org/10.1080/13636829900200071.

[12] Spencer, L (1983) *Soft Skill Competencies*. Edinburgh: Scottish Council for Research in Education.

[13] Eraut, M (1994) *Developing Professional Knowledge and Competence*. London: Falmer.

Job

Meaning: The term "job" has multiple meanings. Firstly, there is an employment meaning for a job. For example, “I have a job” means that I have employment or self-employment. Secondly, there is a position meaning to a job. Having a job means having a position in the organisation or workplace. There is also a task meaning. For example, “do the job” means undertaking the work task. There is also a competency meaning. For example, “get the job done”.

The common trait in any meaning of a “job” is that it is “a set of tasks and duties carried out by one person for an employer, including self-employment.[14] A job represents a formally designated set of responsibilities defined by a job title and a job description. Hence, it establishes the responsibilities of individuals performing those activities in a work context and thus represents what people do in the workplace.

Structure of a Job: Jacobs[15] outlines the different components of a "job" at four levels, arranged as a hierarchy.

The highest level identifies the job's formal title that distinguishes it from other jobs. On the second level, the structure shows that a job comprises of duties. Duties represent an inclusive set of behaviours related to the job. The third level of the structure comprises the units of work, or tasks, that exist within each duty, representing the core aspect of understanding any job. The fourth level includes the individual behaviours that underpin tasks.

Due to the pace of change, jobs are organic, fungible and changeable. This phenomenon has “deregulated” the composition of job descriptions, enabling greater flexibility for responding to the changing work settings. Job titles and job descriptions are written with less specificity, so that jobs are often porous.

[14] Department of Higher Education and Training (2015). *Guidelines: Organising Framework for Occupations (OFO)*. Pretoria: DHET.

[15] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois.

Job Shift

A job shift in labour economics refers to the mobility of workers. There are two types of job shifts. External job shift is the mobility of a worker to a different type of organisation or industry. Internal job shift is the worker's mobility to a different job in the same type of organisation. The former is a good indicator of the growth or decline of occupations in the industry. The latter indicates an individual's efforts to relocate to workplaces due to personal preferences.[16]

Occupation

The term "occupation" is broader than a "job". An "occupation" represents related jobs in work settings. A job and an occupation are often viewed as the same and used interchangeably. Strictly speaking, it should not be the case.

The Department of Higher Education and Training (DHET) defines occupations "as a set of jobs or specialisations whose main tasks are characterised by a high degree of similarity that they can be grouped for classification".[17]

The occupations identified in the DHET's occupational classification system, the *Organising Framework of Occupations (OFO)*, represents a category that encompasses an occupation and its specialisation, e.g., a general medical practitioner (occupation) and heart surgeon (specialisation).

Occupations are classified into:

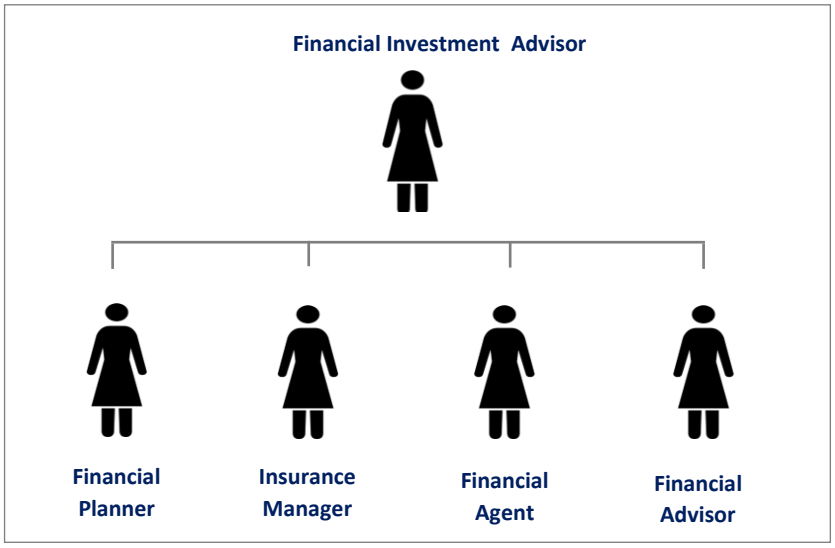
- Skill level.
- Skill specialisation, where skill is used in the context of competency rather than a description of tasks or functions.[18]

An occupation represents a set of similar jobs that occurs across different work settings. An occupation can also be defined by an occupational title and an occupational description, but this information is necessarily less context-specific than that of a job title and job description.

The exhibit below represents the framework for understanding an occupation. For instance, *Financial Investment Advisor*'s occupation typically occurs across several different work situations and can have different job titles in each organisational context. This is true, regardless of the nature of the occupation.

[16] Zhou, X; Tuma, N.B & Moen, P. (1997) Institutional change and job-shift patterns in China, 1949 to 1994. *American Psychological Review*, 62(3), June: 339-365.
[17] Department of Higher Education and Training (2015). *Guidelines: Organising Framework for Occupations (OFO)*. Pretoria: DHET.
[18] Ibid.

Exhibit 3: Understanding Occupations



The structure of an occupation has a similar set of hierarchical components as jobs. It includes identifying clusters of work called jobs.

The structure of occupations does not include further analysis of tasks for the following reasons:

- Tasks are covered adequately under jobs.
- It is difficult to conduct task analysis at a high-level.
- Occupations represent related jobs across different workplace contexts. Therefore, it is impossible to analyse tasks as part of an occupational analysis because of the differences in each work context.

Occupational Analysis

It is necessary to conduct an occupational analysis to measure occupational change. The subject matter expert (SME), or occupational analyst, selected for the analysis should have a diverse background, representing all aspects of the occupation.

An occupational analysis typically requires more information than a job analysis, such as forecasts of future hiring outlooks, career pathways, education and credentialing requirements. An occupational analysis typically offers a complete picture of the work involved than that of a job analysis.

An occupational analysis can be used for a wider range of purposes than a job analysis.

Occupational analysis can be used in the following ways:

- Developing curricula that focus on an occupation.
- Establishing occupational standards for qualification development, certification and licensure.
- Designing employee development programmes.

Occupation analysis involves a systematic investigation of occupations using various methods to determine essential duties, tasks and responsibilities. Occupational analysis facilitates accurate recruitment and selection practices, sets standards for performance appraisals and allows for classification of positions.

Occupational Design

Occupational design is the process of determining the elements of an occupation.

Occupational Change

The definition of "occupational change" in the literature is varied, depending on the field of study, the authors and the purpose of the study.

Labour economists generally refer to "occupational change" when a person changes their occupation. For example, from a teacher to a marketing manager, or welder to a carpenter. The measurement unit for occupational change is referred to as occupational turnover. This suggests some labour-market “turbulence” caused by people being caught in poor jobs and unsuitable work and is forced to try another type of work, not just another job. The labour economics definition is not relevant to our study. In other words, the movement from one type of job to another is not the focus of this study.

Occupational change may also refer to occupational movements. In this definition, occupational change refers to change in the number of people in an occupation over some time. For example, the number of plumbers may have increased or decreased by 20% over five years.

Occupational change may also be measured geographically. For example, the number of plumbers may have increased or decreased in a specific region.

In this study, the researchers have defined "occupational change" from a human resource management perspective.

The following elements characterise occupational change:

- A change in a new professional activity.
- Job tasks added to occupation from a similar or new field.
- A substantial change in the work content related to an occupation.
- The necessity to acquire different competencies to fulfil the job tasks.
- A change in the range and depth of job tasks in an occupation.
- An enlargement of jobs.

Occupational change may occur in an occupation in the same organisation, or by the movement to other organisations in the same occupation. Occupational change may occur in an occupation in the same industry or move to other industries for the same occupation. The is no standard unit of measurement for occupational change from this perspective.

Occupational Cluster

An occupational cluster represents a broader perspective than a single occupation. Some of the occupational clusters are information management and computing, management, sales, marketing, human resources, applied sciences, transportation and logistics. Each occupational cluster could have many similar occupations. Occupational clusters enable movement between occupations in a cluster.

Occupational Structure

An occupational structure is an occupational category system that organises occupations into categories. In South Africa, the occupational structure is Manager; Professional; Technician; Clerk; Sales and Services; Skilled Agriculture; Craft and Related Trades; Plant and Machine Operator; Elementary; and Domestic Worker.[19]

Occupational Classification System

Occupational classification systems are taxonomies for naming and grouping occupations into ever-larger subsets. The DHET uses the *Organising Framework of Occupations (OFO)*, a coded occupational classification system. It is the department's key tool for identifying, reporting and monitoring skills demand and supply in the South African labour market.

[19] Statistics South Africa (2020). Quarterly Labour Force Survey, 3rd Quarter.

The OFO is constructed from the bottom-up by:

- Analysing jobs and identifying similarities in tasks and skills.
- Categorising similar jobs into occupations.
- Classifying these occupations into occupational groups.

The OFO adds value to skills development planning and implementation by:

- Providing a common language when talking about occupations.
- Capturing jobs in the form of occupations.
- Grouping occupations into successively broader categories and hierarchical levels based on the similarity of tasks, skills and knowledge.[20]

Education Qualification

An award is given to a student who has demonstrated competence in achieving a specific qualification. For example, a Bachelor of Technology Degree. Economists use education qualifications as a proxy for skills.

Competency

Competency refers to those characteristics, including personality traits, certain abilities, and any other relevant aspects of the individual, such as motivation, critical for a particular job role.[21]

Difference Between a Job and Occupation

An occupation has a broader scope than a job since it refers to a group of related jobs across different work settings. A job is a defined role that occurs in a specific work setting only.

[20] Department of Higher Education and Training (2015) *Organising Framework of Occupations*. DHET: Pretoria.
[21] National Research Council, 1999. *The Changing Nature of Work: Implications for Occupational Analysis*. Washington, DC: The National Academies Press. https://doi.org/10.17226/9600.

Jacobs compares jobs and occupations in several functional areas:[22]

Area	Job	Occupation
Context	A specific work or organisational context.	Across a wide range of similar contexts.
Analysis	Through job analysis, job standards describe a specific job in a certain work context.	Through an occupational analysis, occupational standards describe a set of related jobs across settings.
Components	▪ Job description ▪ Duties ▪ Tasks ▪ Task components ▪ Additional information	▪ Prerequisites ▪ Values ▪ Attitudes ▪ Duties ▪ Tasks ▪ Additional information
How it is used	▪ Design in-company training programmes.	▪ Curriculum development. ▪ Information for employers, employees and job-seekers to reduce labour market imbalances.
Determination of validity	The job description represents what is done in a specific job.	An occupation represents a consensus among the stakeholders about the occupation.

Occupational Analysis and Job Analysis

The occupational analysis is essentially the same technique as job analysis. But an occupational analysis differs from job analysis in at least three related ways.

First, the frame of reference for occupational analysis is based on an occupation, not on a job. Occupation has a broader scope than a job since it refers to a group of related jobs across different work settings. A job is a defined role that occurs in a specific work setting only.

Second, an occupational analysis typically requires that more information be gathered than a job analysis, such as forecasts of future hiring outlooks, the career pathways from this occupation to other occupations, and the educational and credentialing requirements of the occupation, among other information. In this sense, an occupational analysis typically offers a complete picture of the work involved than a job analysis.

[22] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois.

Finally, as a result of its broader focus, occupational analysis can be used for a wider range of purposes than a job analysis.[23]

Profession

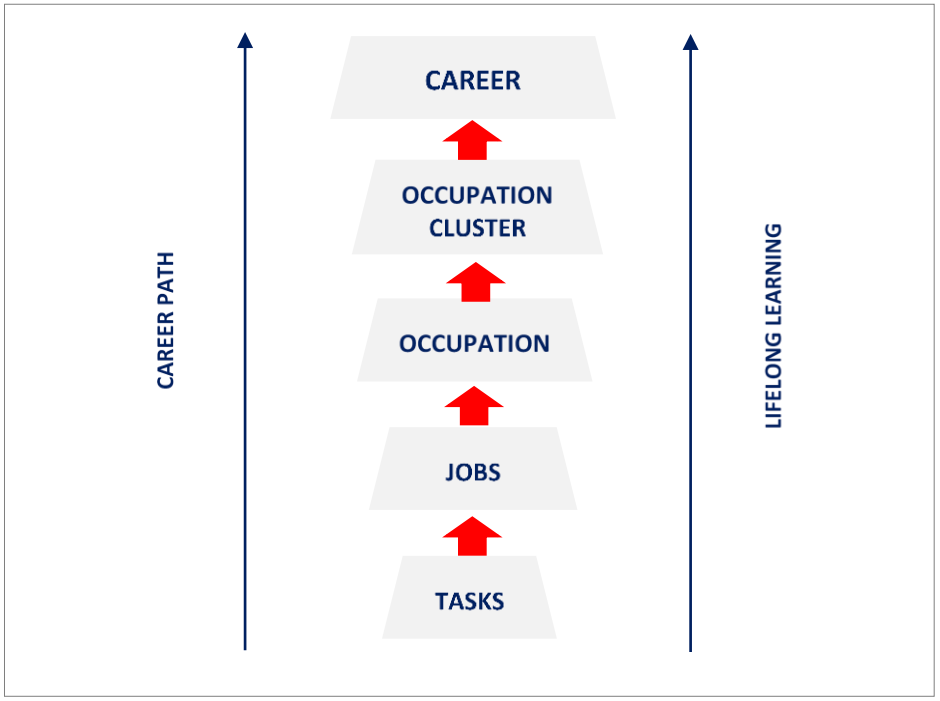
A profession refers to a specialised qualification, skills, knowledge and appropriate work experience. Professions often require education, certification or licensing. Professions are broader than job titles but not as broad as an occupation. For example, your job title may be a prosecutor, but your profession is a lawyer.

Career

A career refers to the sequence of related jobs or occupations that a person may hold over their working life. A career is an expression of an individual's commitment to the general type of work represented by various jobs or occupations, such as a career in information technology.

A career denotes the progression of jobs or occupations that the individual has done in the past, the individual is currently doing, or the individual plans to do in the future. Regardless of the time referent, a career has a relatively long-term meaning attached to it.

Exhibit 4: Careers



[23] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois.

3. PROBLEM STATEMENT

Many companies are concerned about the future of work and the way digital technologies are change where, when, and how employees approach their jobs. However, few are asking a fundamental question: What should that work be? If organisations fail to challenge today's work, they could miss significant opportunities to create value for employees and customers.

The COVID-19 pandemic and lockdown has accelerated change in the insurance sector. Insurance firms are reviewing their business models, strategies, staff structures, products and services, supply chains, marketing channels, distribution, sales, employee roles; business processes; information systems and technologies to adapt to a rapidly changing business environment.

These developments are changing work, jobs and occupations. The systems, approaches, methods and tools for tracking, tracing and measuring the extent of occupational changes appear not to have kept pace with development in the external environment. Since 1994, the government has reconfigured the education and training landscape from pre-school to post-school education and training. The system is underpinned by the National Qualifications Framework, Quality Councils, new educational institutional types, Sector Education and Training Authorities, the National Skills Authority and other structures.

The Quality Council for Trades and Occupations (QCTO) was established to manage the Occupational Qualifications Standards Framework (OQSF). It sets standards, develops and ensures national occupational qualifications for all who want a trade or occupation. However, the excessive bureaucracy and high costs for developing qualifications have not kept pace with industry developments. This means that when occupational qualifications are finally registered on the OQSF, it is already criticised for lacking relevance to industry's needs.

The procedures for developing occupational standards pay great attention to stakeholder representation and less attention to technical proficiency. Moreover, there are no approaches, processes, methods, or tools used by the QCTO to measure occupational change.

Key questions to determine occupational change are lacking:

- Why are occupations changing?
- How are occupations changing?
- What is the pace of occupational change?
- What is the range and depth of occupational change?
- How do you measure occupational change?
- What are the implications of occupational change for training provision?
- How do you incorporate occupational change into qualifications?

The Department of Higher Education and Training (DHET) goes to great lengths to research occupations in high demand and skills shortages in the labour market. However, there is a lack of research on the impact of occupational change on employees and companies' internal labour market. If occupational change is not measured, it leads to a considerable waste of resources in training for occupations that are not aligned to the workplace's needs.

National accounts focus on the relative growth and decline of broad occupational categories used by Statistics South Africa. It is useful for providing a pattern of the changing mix of occupations. It may show the number of professionals or managers increasing or declining quarterly. However, it does not offer information about what is happening to the nature of work in these occupational categories or whether the categories are useful for distinguishing among workers' activities and experiences in different occupations.

There is a need to investigate employees' skills in specific occupations to tailor training offerings and assess whether they are prepared for the rapidly changing work environment. The changing nature and content of work require a regular review of jobs, occupations, skills sets, aptitudes and education qualifications in the insurance sector. Currently, the traditional job description in insurance occupations do not reflect what employees do in the workplace. This disconnect sends the wrong signals to employers and training providers.

Our review of these systems suggests that its main use is to describe how work has been structured in the past. It is a backward-looking approach since it describes jobs in the past. Occupational analysis should become forward-looking and serve as analytic aids for decision-makers. Thus, if properly updated and fully applied, occupational analysis systems can support better tracking and assessments of work changes.

Employers are critical of training programmes, training providers and the quality of new graduates emerging from institutions. Their concern is that graduates are not work-ready. One of the reasons for this is that traditional training programmes are based on traditional job descriptions. However, the occupational landscape is changing, implying that training providers and curriculum developers cannot keep abreast with change.

There is remarkably little agreement about the nature of occupational competence, expertise, how it may be conceptualised and assessed. Eraut[24] refers to "the primitive state of our methodology for describing and prescribing a profession's knowledge base". Occupational analysis is a growth area, but characterised by researchers and developers who work isolation, using different methodologies, both in their processes and in their beliefs.

Human resource professionals find it difficult to analyse work in their organisations. The challenge is amplified when analysing the work of higher-level technical experts and professionals. Occupational analysis receives limited attention in most training institutions. Therefore, human resource professionals enter the workplace with a lack of "know-how" to

[24] Eraut, M (1994) *Developing Professional Knowledge and Competence*. London: Falmer.

measure occupational change and offer the most appropriate capacity-building interventions. Occupational analysis represents how an occupation appears across different work settings. It is necessary to identify how an occupation appears in a specific organisational context. In practice, identifying the precise boundaries of an occupation is difficult due to job changes.

The service sector in South Africa is greater in value than the manufacturing sector. Work has become more complex, placing greater demands on the individuals doing the work. Employees at all occupational levels are expected to engage in higher-order thinking such as problem-solving, understanding technology, decision making and critical analysis.

The skills, knowledge, and abilities demanded in the changing work structure are captured by occupational classification systems such as the Organising Framework of Occupations. This information is standardised for comparability, but standardisation militates against the trend toward broader jobs and permeable boundaries between the jobs. Thus, occupational classification systems should enable variation and help those designing jobs better understand the organisational forces that influence how work is done.

Work is becoming project and team-based, changing the mix of skills possessed by a typical worker and blurring traditional demarcations across occupations. Changing economic conditions may lead to atypical employment arrangements such as entrepreneurial, part-time, contingent, contract work and self-employment. These developments have implications for occupational analysis methods and techniques because they call into question what is meant by a "job."

Occupational analysis is necessary for designing occupational profiles, performance standards, training, support systems, and planning career development efforts. As technologies fold, occupational change is necessary to identify the changing job requirements.

There is a view that occupational analysis is an attempt to predict the future. Rather, it attempts to provide a framework that will help human resource practitioners make more informed choices about work, jobs and occupations. There is no singular deterministic trend in how work is changing. Instead, there are systematic variations that can be influenced by choices.

Research on occupational change in South Africa is scarce. Given the uncertain and multiple directions in which work, jobs and occupations are changing, determining whether and how it is changing, and recommending an approach for mapping an occupational structure is necessary.

The range of choices about how to structure occupations appears to be increasing. Although the market, technological, and demographic forces impinge in systematic ways on how work structures evolve, they are not deterministic. HR specialists and the tools they also use shape work structures.

There is a need to take a systemic approach to understand how occupations are changing and its effects. We, therefore, need to provide a conceptual map of the broader system of decisions that need to be considered in thinking about work and occupational analysis are being blurred as organisations emphasise teamwork and hold a larger range of employees responsible for communicating and interacting directly with customers, clients, or co-workers inside or outside the organisation.

If careers increasingly span several employers, occupational structures based on job ladders in companies may become less important, and those that cut across organisations may become more so. Career paths may increasingly be built around temporary and part-time jobs, often in combinations that do not necessarily fit traditional notions of internal mobility.

4. OUTCOMES

The outcomes of this study are to:

- Establish a common frame of reference of key terms used in the study.
- Locate key occupations in the insurance value chain.
- Identify factors that are changing work, jobs and occupations in the insurance sector.
- Identify insurance occupations that are undergoing significant change.
- Provide a toolkit for human resource practitioners in the insurance sector to measure occupational change.

5. RESEARCH QUESTIONS

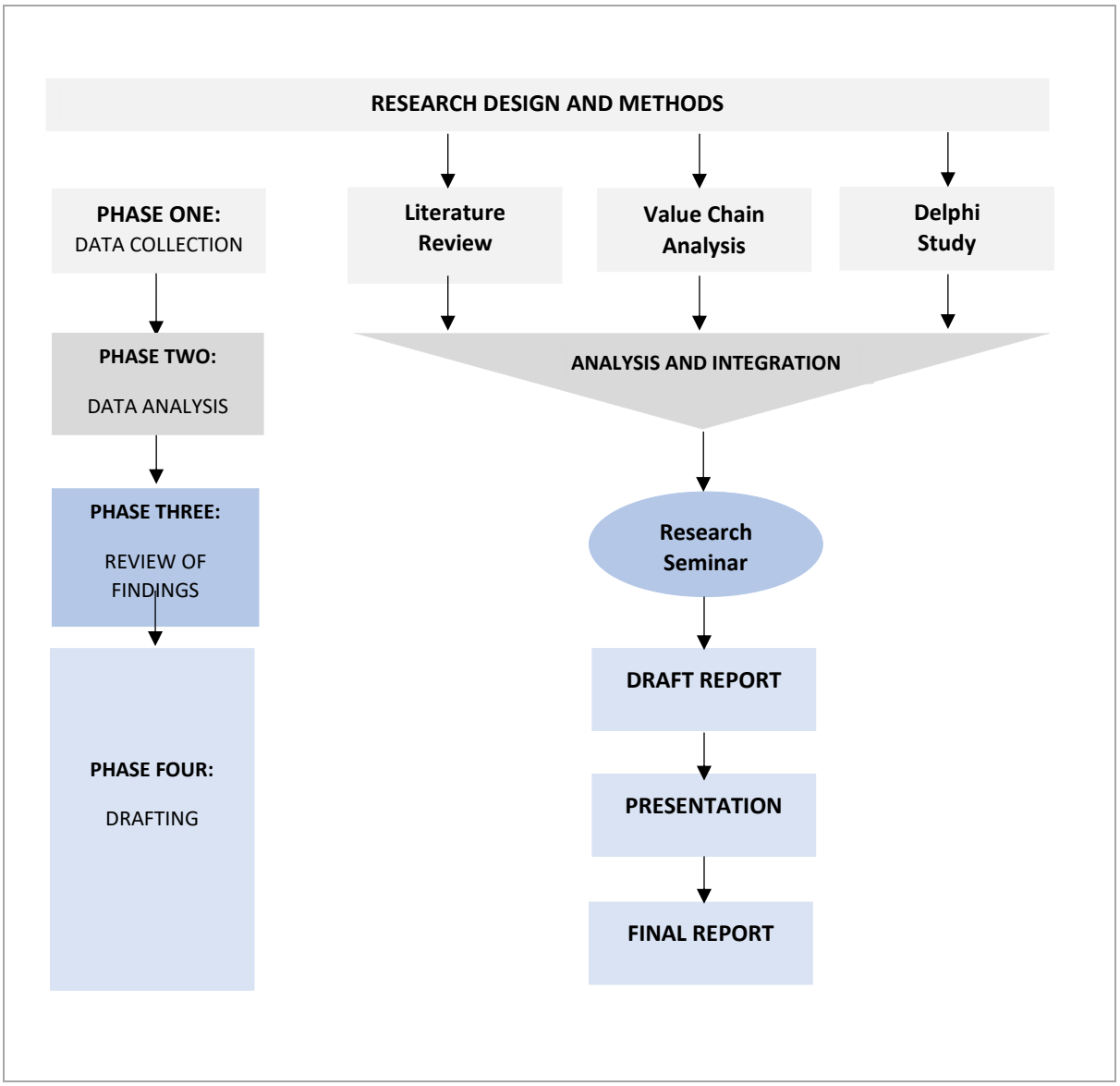
The key research questions are the following:

- What are the definitions of key terms used in the study?
- Where are key occupations located in the insurance value chain?
- What factors are changing work, jobs and occupations in the insurance sector?
- Which insurance occupations are undergoing significant change?
- What is the extent and nature of these occupational changes?
- How is occupational change measured?

6. RESEARCH DESIGN AND METHODS

The COVID-19 pandemic and ensuing lockdown have dictated the research design and methods for this study.

Exhibit 5: Research Design



6.1 Data Collection

Data is collected through a literature review, value chain analysis, seminar and the Delphi study.

Literature Review: A literature review is conducted of industry publications, research studies, industry strategies, career guides, occupational classification systems, academic papers and statutes to determine factors reshaping work, jobs, occupations, qualifications development, training programmes and skills acquisition in the insurance sector. The literature review also clarifies definitions, traces the changing patterns to the occupational structure, and devises an occupational analysis approach.

Value Chain Analysis: Value chain analysis (VCA) presents the value created in a product or service as it is transformed from raw inputs to a final product. In this study, key occupations are located in the various segments of the insurance value chain. VCA measures changes in the value chain and offers insights into qualifications development, training and skills acquisition. A single value chain is devised for the insurance sector rather than multiple value chains.

Delphi Study: The Delphi study uses a panel of insurance experts representing key occupations in the sector. The experts are sent a series of questions which they are expected to answer (round one). A summary of views is presented from the preceding round of questions before answering the next (round two) questions. The range of responses by the panellist's decreases and the median moves toward what is deemed to be the “correct” answer.

The feedback process allows experts to reassess their initial judgments. Anonymity is provided to experts. The idea is that the respondents can learn from other views, without being unduly influenced by overbearing people, stakeholder grouping, and those with big reputations. The “bandwagon or halo effect” is avoided.

Purposive sampling is used to select the panel of experts for the Delphi Study. This type of non-random sampling is based on pre-determined criteria of research issues under consideration.

The following criteria are considered for selecting panellists:

(i) Occupational expertise
(ii) Practitioner work experience
(iii) Knowledge of skills development

Seminar: A seminar was convened online to discuss the literature review and Delphi study findings. A total of 30 industry experts, academics and INSETA managers attended the session.

The following questions were discussed:

- What occupations in the insurance sector are undergoing significant changes?

- What factors are driving these changes in the insurance sector?
- How should occupational change be measured? In other words, if you are requested to measure the extent of occupational change for an underwriter, how would you go about doing this?
- How should the INSETA ensure that occupational changes inform the development of qualifications?
- How should training providers respond to rapid occupational changes in the insurance sector?

6.2 Data Analysis

Data from the literature review, value chain analysis and the Delphi study are analysed and integrated. The analysis requires that the data be organised, scrutinised, selected, interpreted and triangulated.

Triangulation: Refers to a process of using multiple data collection research methods and techniques to address a research problem. Using a range of methods and techniques, information and data can be gathered and measured to test the research findings for accuracy, reliability and content validity. Triangulation integrates the findings to acquire a complete understanding of a research problem.

Qualitative Analysis: This form of data collection and analysis is based on Grounded Theory. The researcher uses a constant comparative analysis method to determine approaches, methods, and typologies to workplace learning inductively.

The analysis of the qualitative data is composed of three major steps:

Open coding: breaking down, examining, comparing, conceptualising and categorising data from the Delphi Study.

Axial coding: a set of procedures whereby data are put back together in ways after open coding by making connections between categories.

Selective coding: the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further development and refinement. The goal is to identify patterns among the categories.

Workshop: An online workshop is convened with industry stakeholders to discuss the preliminary findings from the literature review, value chain analysis and Delphi study. The purpose of this workshop is to discuss the findings, elicit feedback, and establish whether key issues are addressed.

6.3 Findings

Findings will be drawn from the data analysis.

6.4 Drafting

The process is as follows:

- Production of Draft Report.
- Submission of the Draft report to the INSETA for feedback.
- Production of the Final Report.
- Presentation to INSETA.

7. THEORETICAL PERSPECTIVES OF OCCUPATIONAL CHANGE

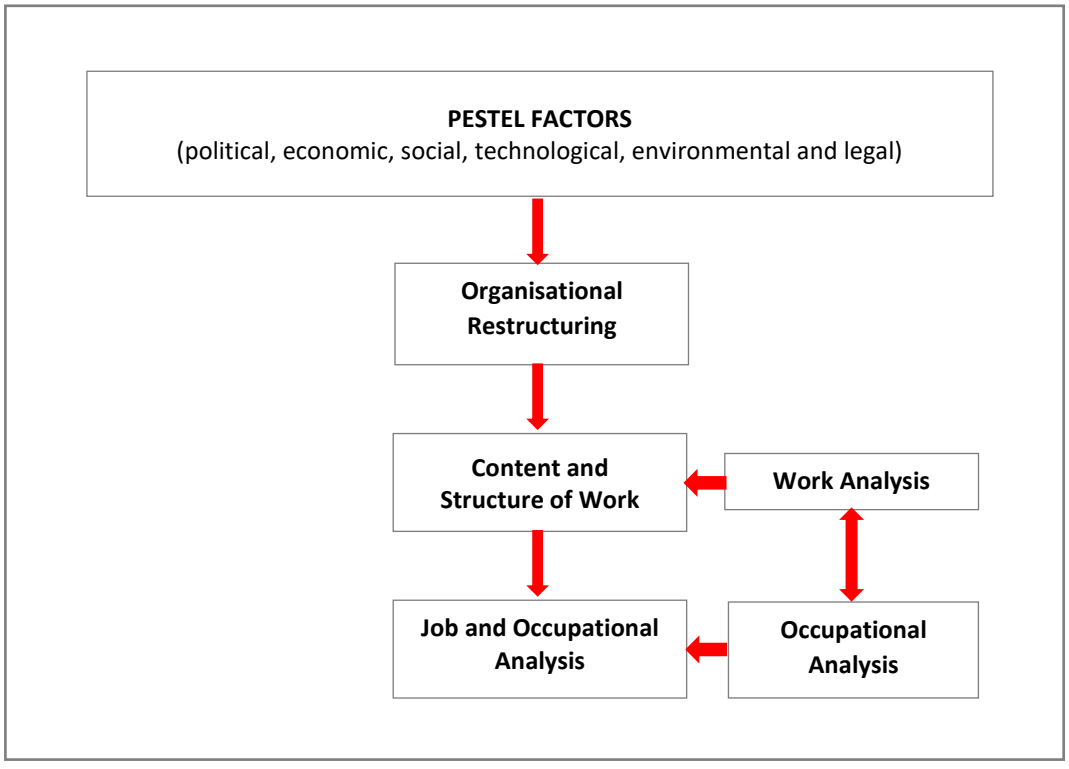
This section examines the theoretical perspectives of occupational change. It discusses theories, models and approaches to occupational change.

7.1 A Conceptual Framework

To better describe and track occupational change, it is necessary to understand the changing nature of work, and possibly gain greater control over how people work. It is necessary to consider the full range of forces that shape work and how they are changing jobs and occupations.

The exhibit below lays out the framework to analyse these forces and their effects on work, jobs and occupations.

Exhibit 6: Changing Nature of Work and Occupations



PESTEL factors: Arguably, the most widely recognised force shaping work and occupations is *technology*. Several investigators argue that that technology is changing the nature of work

and the way we work largely through digitalisation and artificial intelligence, which are also driving forces of the fourth industrial revolution.[25]

They observe that the technology is driven by mobile connectivity, artificial intelligence, Big Data, the Internet of Things (IoT), next-generation robotics, additive manufacturing (three-dimensional printing), blockchain software, wearable technologies and machine learning. The explosion of digital telecommunications evidenced by the unprecedented growth of the Internet and the World Wide Web has brought the world to the verge of a transformation similar to the second industrial revolution.

The other external forces are broadly identified as contributors to the changing nature of work. These are political development, economic performance, social issues, environmental matters and legal or regulatory changes.

7.2 Work Analysis and Occupational Analysis Process

The same process can be adopted for conducting a work analysis and occupational analysis.

The following questions are pertinent for work and occupational analyses:[26]

Work Analysis	Occupational Analysis
▪ What is the work that people do? ▪ What are the characteristics of people who successfully perform the work?	▪ What are the jobs in the occupation? ▪ What are the requirements to perform the job competently? ▪ How has the job changed? ▪ Based on the job changes, how has the occupation changed?
i. Plan the Analysis: The first phase of the work analysis process is to plan the analysis. There are three related components to consider.	
a. *Specify the purpose of the analysis*. The purpose statement addresses two basic questions: (1) what information is sought and (2) how will the information be used?	

[25] Rasool, H (2019). The Fourth Industrial Revolution and its Implications for the Insurance Sector, September. A paper for the INSETA.
Accenture (2018) The future workforce survey: insurance. Accenture: UK.
Deloitte (2018) The Future of Talent in Insurance. Deloitte: Dublin.
[26] Jacobs, RL (2019) *Work Analysis in the Knowledge Economy: documenting what people do in the workplace for human resource development.* Palgrave Macmillan: Illinois

b. *Decide which work analysis techniques will be used*. The various work analysis techniques should be considered and the appropriate ones identified. c. *Develop a proof of concept prototype*. A proof of concept prototype provides an example upfront on how the work analysis information will be used.
ii. Select the sources and the methods: Determine what sources and methods will be used for the analysis.
a. *Select the sources of information*. Sources of information address the question of where will the information come from?
b. *Select the methods of gathering the information*. The methods of gathering information address the question of how the information will be gathered.
iii. Conduct the work analysis As stated, the work analysis process serves to guide practitioners' actions in conducting a work analysis project. Projects differ in their goals, techniques used and nature of the information that results from the project.
a. *Review the technique-specific process.* The analyst should review the process steps and modify the project's goals and unique aspects. b. *Use the technique-specific process*. This component calls for the analyst to conduct the analysis.
iv. Prepare the work analysis report The analyst should prepare a report that presents the information in a form that satisfies the project goals.
a. *Prepare the draft report*. After data gathering, a draft report needs to be prepared. b. *Review the Report*. The completed draft report should be distributed to the various stakeholders for review and feedback. c. *Prepare the final version of the Report.* Upon completion of the review, the final version of the Report can be prepared.

7.3 Implications for Occupational Change

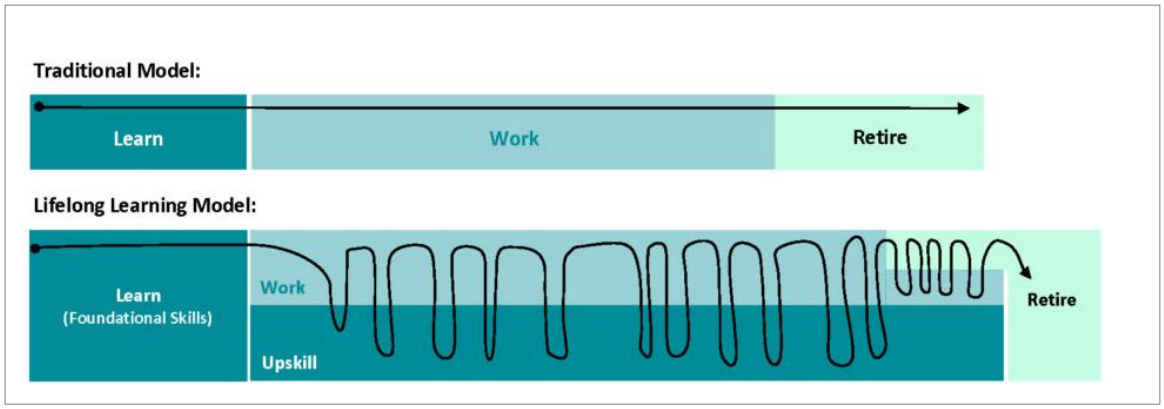
The severity and length of the COVID-19 fallout are uncertain. And much uncertainty remains about what the economic recovery will look like once the virus is contained and restrictions are lifted — how many jobs will be permanently lost, which industries will bounce back unscathed, and which will be forever altered.

The labour market is unpredictable. It is not for lack of data or research capacity. It is because the factors that affect humans cannot be reliably forecasted. However, we can anticipate and prepare for change by building an agile system of lifelong learning.

According to McGowan[27] the lifelong learning model prepares students "to lose their jobs often." Rather than acting as a linear pipeline to a specific job, a modern system of lifelong learning develops transferable skills early in post-secondary and tops up that foundational schooling with job-specific skills via short, flexible programmes throughout our adult working lives.

According to *The New Work Mindset*, a report issued by the Foundation for Young Australians, new students entering the workforce today can expect to have as many as 17 different jobs in at least five industries.[28]

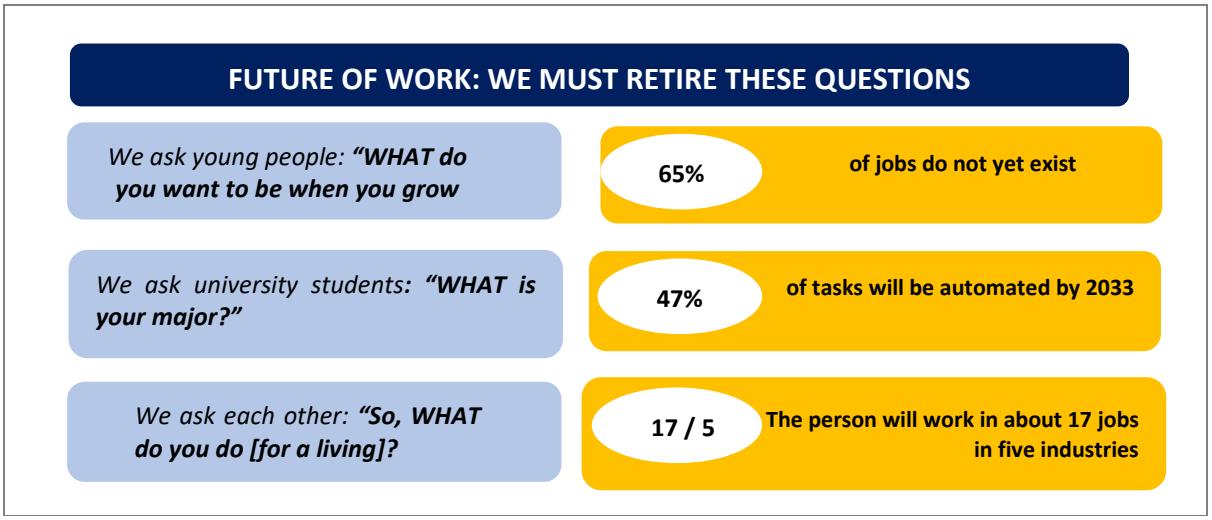
Exhibit 7: The Lifelong Learning Model



Source: McGowan & Shipley (2017)

Education and training institutions in the post-school education and training sector can play an important role in this process by teaching not only the knowledge and skills (qualifications) that workers require for specific careers but also essential transferable skills, such as literacy, numeracy and critical thinking — skills that form the basis for effective lifelong learning.

[28] https://www.fya.org.au/wp-content/uploads/2016/11/The-New-Work-Mindset.pdf



Source: heathermcgowan.com

Each of these questions, promises a future-directed toward and shaped by a job. **Increasingly, the answers inevitably point to a job that may never be there.**

- How can children dream of a career when more than half the work available to them in their adulthood has not yet been conceived?
- How can we encourage students to assume great student debt to acquire a set of skills and base of knowledge for jobs that will evaporate before that debt is paid?
- How will workers describe themselves when they have become unbundled from traditional corporate jobs or cobble together an income from multiple sources?[29]

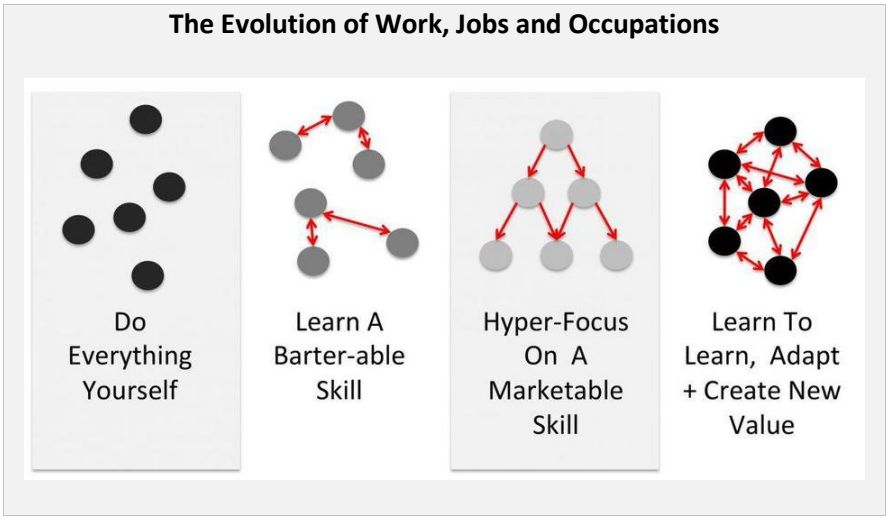
Pichette and Tamburri[30] states the following:

"Still, we ask each other "what". They are questions that may have worked at one time in our history as we rode an escalator from learning through career development and on to a happy retirement. These "what" questions calcified one's identity in a system of education and work that ran like a pipeline from school to factory and corporation, a system that worked well enough in a slowly evolving economy, but one that will fail us desperately as we experience the greatest velocity of change in human history. The escalator is now gone! Now, we must traverse a terrain of broken steps to craft our career arc. To do so, we will need different skills and an entirely new agile learning mindset".

[29] https://collaboration.worldbank.org/content/sites/collaboration-for-development/en/groups/jobs-diagnostics-and-solutions-cop/blogs.entry.html/2020/06/01/jobs_and_structural-y69o.html

[30] Jackie Pichette – Higher Education Quality Council of Ontario (heqco.ca)

Exhibit 8: Future of Work, Jobs and Occupations



Source: heathermcgowan.com

In the era of Taylorism and scientific management, job descriptions made sense because the value was created by driving efficiency to scale effectively. Standardisation and repetitive tasks thrived. Workers relied on well-earned credentials, and built careers on the value they brought to the job. Job descriptions were designed to screen for these credentials and value.

Today, businesses need workers to focus on the non-routine, complex and ambiguous work that requires their uniquely human skills of creativity, communication, collaboration, empathy and judgment. The most valuable workers will be those who create value on the job, relying on an entrepreneurial outlook, a beginner's discovery and an inquiring mind. These workers are best suited to turn insights into new opportunities, a capability we have yet to see put to any job description.

In the Wall Street Journal article, *"Redefine Work to Bring New Value to Customers"*, John Hagel writes:[31]

"Companies seeking to create new value can rethink how workers across the entire organisation spend their time. Instead of focusing on routine tasks, employees can identify customers' current and future needs. While employers won't redefine work overnight, they can choose to be thoughtful about how managers direct workers' time. Leaders can begin encouraging workers to exercise and develop new muscles to prepare for a new type of work — one that generates a greater impact for customers, employees and other ecosystem stakeholders."

[31] Redefine Work to Bring New Value to Customers - CMO Today. - WSJ

Creating new value often requires employers to think differently about work in three ways:

- The objective of work, jobs and occupations become an expanding value, not delivering scalable efficiency.

- The work entails addressing unseen problems and opportunities, not executing routine tasks.

- The work draws on human capabilities such as imagination, intuition, curiosity, creativity and empathy—not on skills tied to a particular task or technology.

When adult learners require retraining or upskilling, they should have access to flexible, short courses that recognise prior learning and experience, and are rigorously evaluated to ensure quality and market value. Such courses should lead to an employer-recognised credential that is portable between post-secondary institutions and allows for learning progression.

McGowan and Shipley[32] mention that those who intend to pursue education and training while in employment prefer short courses that focus on skills development, certificates, licences and personal interest courses. Respondents were evenly split between those hoping to acquire more skills for their current career, skills for a new career, and pursuing personal interests.

Competency-based education (CBE) courses are a promising model for retraining displaced workers and are suited for adults juggling multiple responsibilities. CBE courses are often offered online, tend to be asynchronous (meaning students can learn the same material at different times and locations) and are designed in consultation with employers to be industry-aligned. They award credentials based on skill mastery rather than time spent in a classroom, allowing students with prior learning and experience to progress relatively quickly and cost-effectively. Institutions with flexible learning options like CBE programmes can help individuals who have lost their jobs to re-enter the workforce.

There is a need for encouraging education institutions and their industry partners to design micro-certifications — short, focused credentials that verify mastery of in-demand skills and competencies.

Post-school education and training institutions can ease this unprecedented economic shock by developing an agile lifelong-learning system that features flexible courses.

[32] Future of Work: Learning To Manage Uncertainty (linkedin.com)

7.4 Occupational Information Network (O*NET)

The O*NET is an electronic database of information about occupations. The information about each occupation has been considerably expanded, and the number of occupations included in the system has been considerably reduced. The O*NET is a tool for tracking work changes, assisting in the job and occupational design, and supporting employment decisions.

O*NET is divided into three sections—a description of the content model's components, a general statement regarding prototype evaluation, and a brief presentation of the electronic database and sample screens.

The Content Model*:* The system was conceptualised to aid a wide range of users, such as job applicants, career counsellors, training specialists, displaced workers, recruiters and workforce specialists.

The system is designed to address an impressive array of tasks, including:

- Determining aptitude and skill requirements for jobs.
- Assessing a person's suitability for an occupation.
- Developing training and competency standards for jobs.
- Comparing the skills required for a displaced worker's previous and prospective jobs.
- Documenting physical and contextual demands of jobs.

Although it may seem difficult to envision an occupational information system capable of serving so many goals and the needs of so many users, this is the design goal for O*NET.

The content model developed for O*NET is based on three key postulates[33]:

- Jobs can be described quantitatively according to variables that generalise across jobs.
- Multiple windows (organising systems) can be used to observe the world of work.
- Within a given domain of descriptors, variables can be organised hierarchically within a more general cross-job structure.

The content model covers six domains:

- worker characteristics
- worker requirements
- experience requirements
- occupational requirements
- occupation-specific requirements

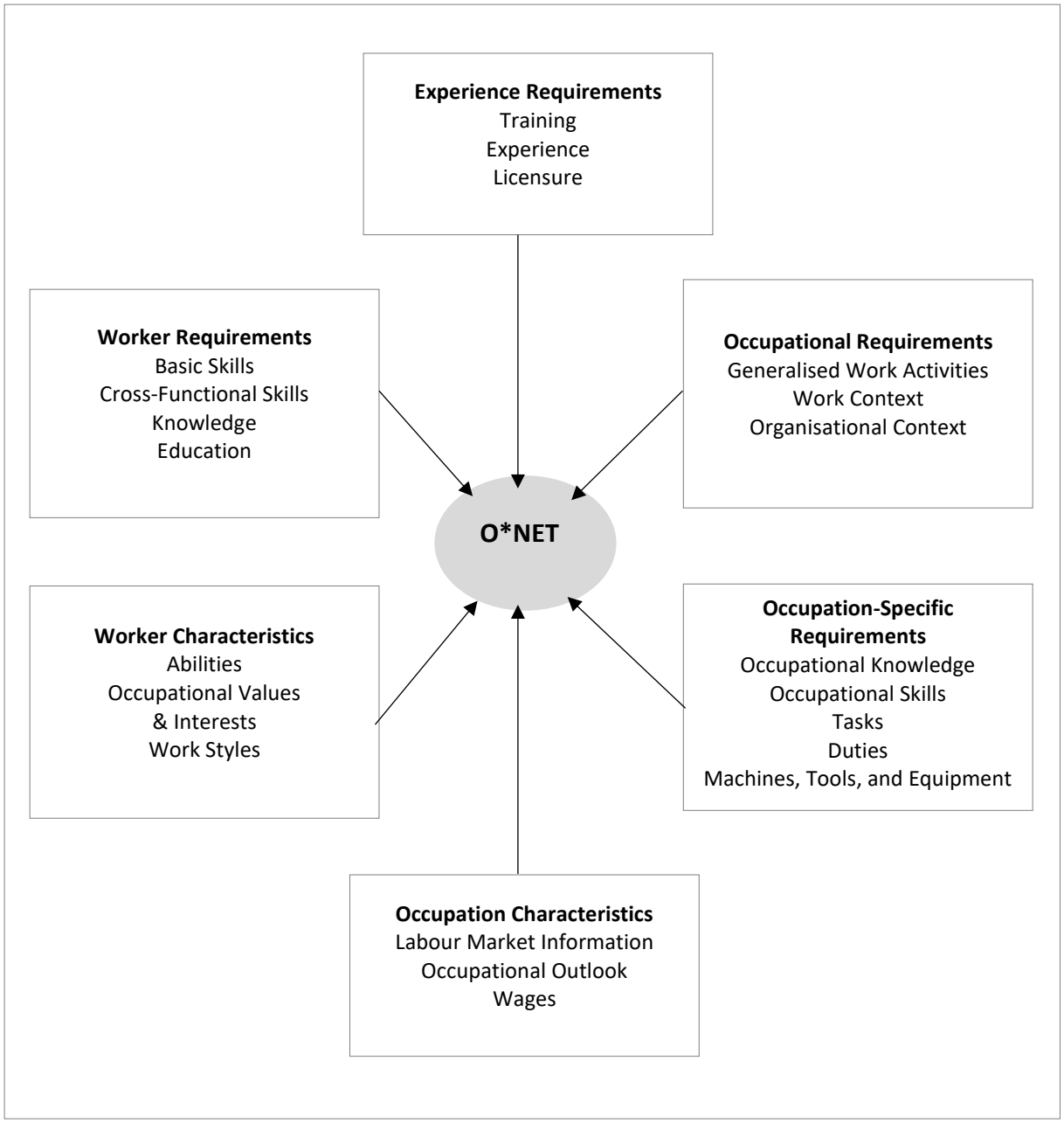
[33] Peterson, N et al. (1997) Job analysis: Overview and description of deductive methods. Pp. 13-50 in *Applied Measurement Methods in Industrial Psychology*, D.L. Whetzel and G.R. Wheaton, eds. Palo Alto, CA: Davies-Black Publishing.

- occupational characteristics

The content model assumes that jobs can be described according to either the demands placed on the people doing the work (worker-oriented descriptors) or the work being done (occupational descriptors). The first three domains relate to worker-oriented requirements.

The last three domains related to the work people do—occupational requirements.

Exhibit 9: Descriptive Domains of the O*NET Content Mode



Source: Peterson (1997)

7.5 Occupational Qualifications Development

The Quality Council for Trades and Occupations (QCTO) is responsible for developing occupational standards and qualifications in South Africa. The way occupational qualifications are constituted offers a means to measure occupational change. A registered occupational qualification is the "yardstick" for measuring occupational change. The availability of registered occupational qualifications facilitates skills development that supports labour market needs and developmental state initiatives.[34]

Occupational curriculum: An occupational curriculum is based on the occupational profile. It ensures consistency of standards to become occupationally competent by specifying the content to be covered within the three learning components (knowledge, practical skills and work experience).

An occupational qualification must contain between 5% and 10% of soft skills, including among other things, personal development, self-learning, workplace preparation, personal finance management, basic entrepreneurship or emotional intelligence.

The Occupational Qualifications Sub-Framework (OQSF), a part of the National Qualifications Framework (NQF), facilitates the registration of quality-assured occupations.

The OQSF provides for 6 (six) occupational qualification types:[35]

General Occupational Certificate	Level 1
Elementary Occupational Certificate	Level 2
Intermediate Occupational Certificate	Level 3
National Occupational Certificate	Level 4
Higher Occupational Certificate	Level 5
Occupational Diploma	Level 6
Advanced Occupational Diploma	Level 7
Specialised Occupational Diploma	Level 8

Source: DHET (2008)

7.6 Develop Occupational Profile

An occupational profile comprises an occupational purpose and the occupational tasks that are performed by practitioners of that occupation. Each task incorporates a related product or service, one or more occupational responsibilities, and one or more occupational contexts. The occupational profile forms the analysis unit to develop learning modules (module specifications) for the three curriculum components and the external summative assessment specifications.

[34] Accessed at https://www.qcto.org.za/

[35] Higher Education and Training Department. National Qualifications Act (67/2008): Revised Occupational Qualifications Sub-Framework

Experts in the occupation and employers develop the occupational profile. It is an iterative process and includes eight steps:

Step 1	Define the provisional occupational purpose.
Step 2	Identify the stages in the business process.
Step 3	Identify the unique products or services for the occupation or specialisation.
Step 4	Identify the responsibilities and practical skills for each product or service.
Step 5	Identify the context and work experience for each product or service.
Step 6	Identify part qualifications and points for external assessment.
Step 7	Finalise the occupational purpose and task statements.
Step 8	Develop the qualification.

7.7 Conclusion

As organisations adopt new technologies and respond to other forces, they find that virtually every job must change. The jobs of the future are more digital, multi-disciplinary, and data-driven. Paradoxically, to take full advantage of technology, organisations must redesign jobs to find the human dimension of work.

This will create new roles that we call "super jobs" that combine parts of different traditional jobs into integrated roles that leverage the significant productivity and efficiency gains that can arise when people work with technology.[36]

Jobs have evolved from:

Standard jobs: Roles that perform work using a specified and narrow skill set. Generally, organised around repeatable tasks and standard processes.

Hybrid jobs: Roles that perform work using a combination of skill sets drawing on both technical and soft skills. Historically, these types of skills have not been combined in the same job.

Super jobs: Roles that combine work and responsibilities from multiple traditional jobs, using technology to augment and broaden the scope of the work performed and involve a more complex set of domain, technical and human skills.

Recoding work for the future demands a new approach: not just rewriting job descriptions, but instead starting with a broader canvas and then composing the work so it can take advantage of machines, workers in alternative work arrangements, and – most importantly – unique human capabilities such as imagination, curiosity, self-development and empathy.

[36] Deloitte (2019) Global Human Capital Trends Report.

This contrasts with the traditional approach to creating job descriptions, which have typically been defined by a narrow view of workers' skills, activities, tasks, and expectations in highly specific roles. This has led to a proliferation of uninspiring – job descriptions and profiles. A job canvas, on the other hand, takes a more expansive, generative and meaningful view.[37]

[37] Deloitte (2019) Global Human Capital Trends Report.

8. IMPACT OF CHANGE DRIVERS ON OCCUPATIONS

This research study seeks to understand the different aspects of work by examining the key external factors affecting work and changing the insurance sector's occupations.

As a start, it is necessary to understand and consider the full range of forces that shape work and how these forces are changing. It would enable organisations to describe better and track the nature of work, and possibly gain greater control over how people work.

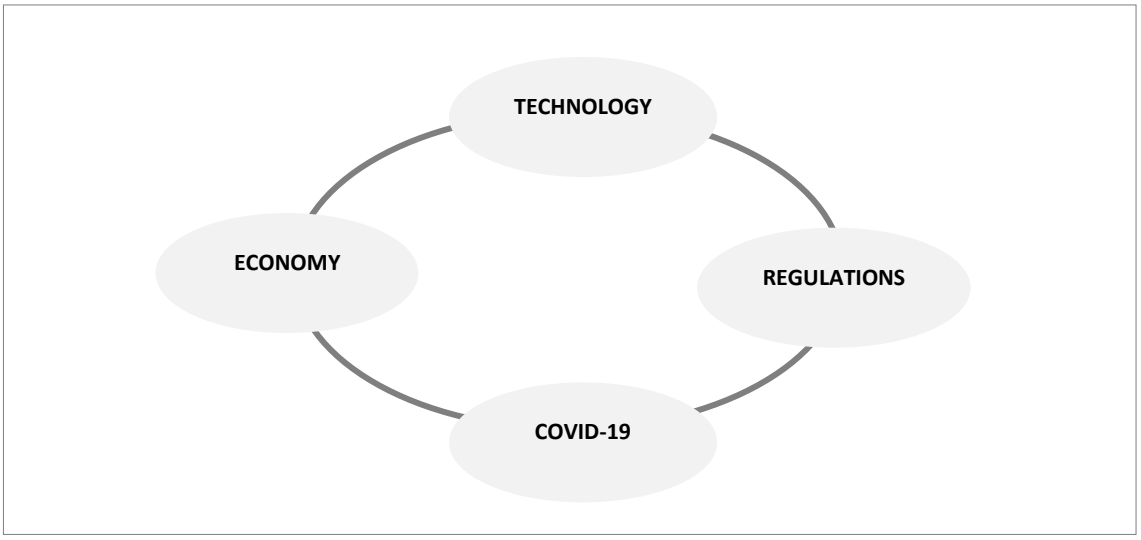
The "nature of work," usually refers to four modalities of work activity:

- What people *do* for a living.
- The *content of work* or how people do what they do: the techniques, technologies, and the skills they employ.
- The *organisational, social and institutional contexts* in which work takes place.
- *Work affects and relates to other aspects of daily life— families, relationships, community life, motivation, self-esteem, social status, etc.*

8.1 Insurance Sector Change Drivers

The INSETA is researching change drivers in the sector annually through its Sector Skills Plan and in-depth interviews with key role-players.

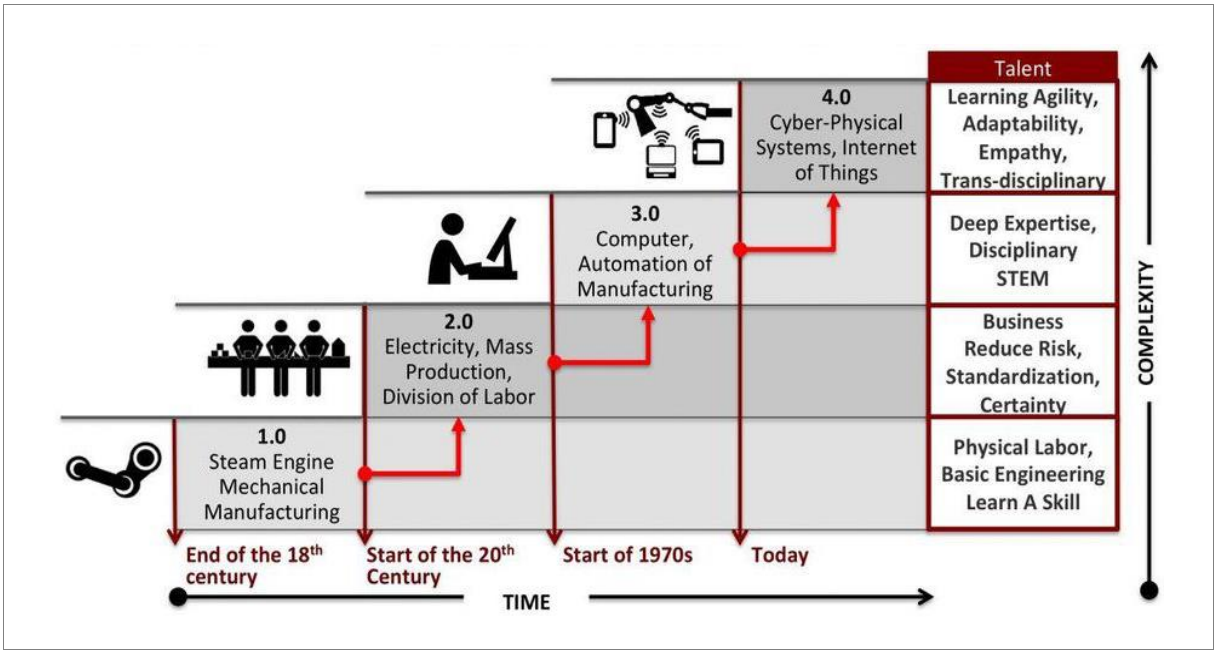
Exhibit 10: Change Drivers in Insurance



8.1.1 Industry 4.0

This 4th industrial revolution, which is defined as the convergence of new technologies, is radically disrupting the insurance sector.

Exhibit 11: 4th Industrial Revolution



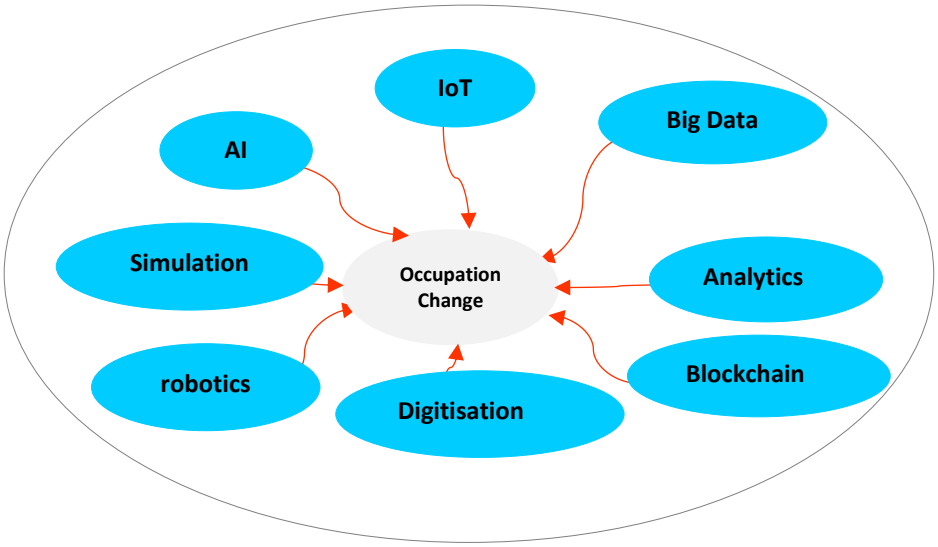
Source: World Economic Forum

- The 1st industrial revolution was steam-powered.
- The 2nd industrial revolution was electrification and mass production.
- The 3rd industrial revolution was the advent of computerised technologies and the automation of physical labour such as manufacturing.
- The 4th industrial revolution is marked by advances in technology but most notably the automation of cognitive labour. No matter how cognitively intense, anything mentally routine or predictable can and will be achieved by some form of technology. As a result, we need to think differently about what work humans do and prepare them for that work.

The defining features of each industrial revolution are the following:

- Introduction of new products and innovations in producing existing ones.
- Disruption of the competitive status quo.
- New workforce and infrastructure requirements.
- Disruption of labour markets.
- Displacement of established companies.
- Higher-order skills requirements

Exhibit 12: Industry 4.0



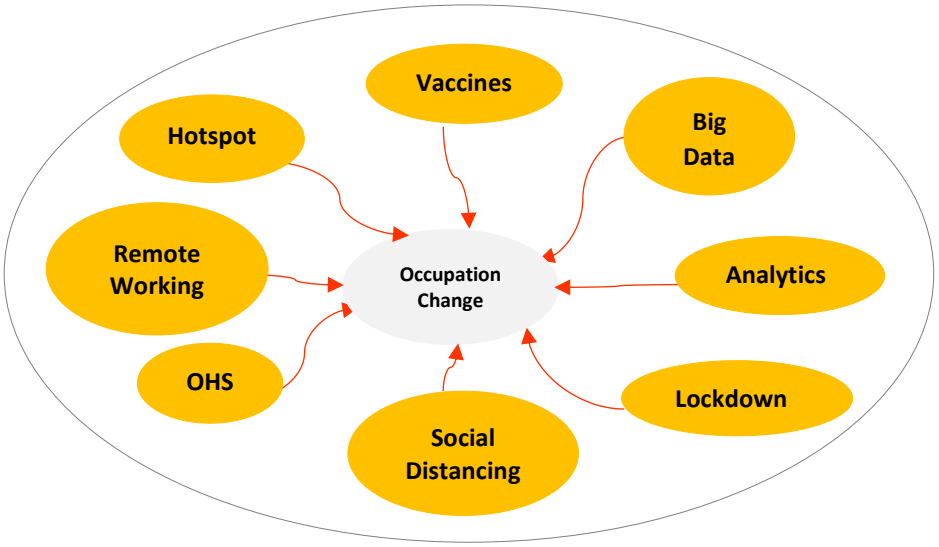
Source: INSETA Sector Skills Plan 2019-2020

System integration	The process of linking together various IT systems, services or software to enable all of them to work functionally together.
Internet of things	A network of machines and devices that have built-in connectivity, electronics, software or sensors that allow them to share data and improve efficiency.
Predictive maintenance	A technique that uses condition-monitoring tools to track the performance of equipment to detect possible defects and fix them before they fail.
Autonomous robots	Like humans, they can make their own decisions and then act accordingly.
Additive Manufacturing	3D printing as it is known, builds up components from scratch, using only the material needed and minimising waste.
Augmented Reality	A technology that superimposes a computer-generated image on a user's view of the real world.
Simulation	Also called Virtual Reality (VR). The use of computer technology to create a simulated environment.
Cybersecurity	The practise of protecting systems, networks, and programs from digital attacks.

8.1.2 COVID-19 Pandemic

The COVID-19 pandemic is a "game-changer" for the insurance sector. It is altering how the sector works, develops, sells insurance products and communicates to the world.

Exhibit 13: COVID-19



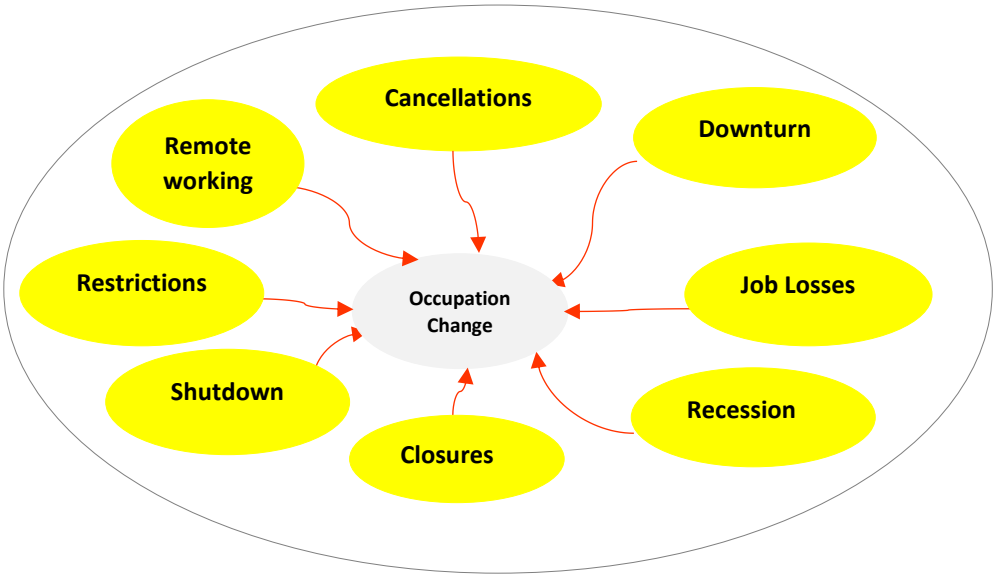
Source: INSETA Sector Skills Plan 2019-2020

Vaccines	The successful implementation of a vaccine programme will "normalise" the insurance sector.
Big Data	Big Data is widely used by the sector for decision-making, risk management and pricing.
Analytics	The insurance sector is data-driven. Hence data analytics is a key skill for insurers.
Lockdown	The national lockdown has necessitated that the sector review its products, service delivery, pricing and risk.
Social Distancing	Social distancing is now a part of life and determines the spread of the virus which has insurance pay out implications.
OHS	Occupational health and safety should include protocols for COVID-19.
Remote working	Remote working is very well-suited to the insurance sector. Many employees are working remotely. It has implications for the management of staff, remuneration and benefits.
Hotspots	Hotspots refer to areas where the virus is highly prevalent.

8.1.3 Economy

The economy was ailing before the COVID-19 crisis. The situation has since worsened.

Exhibit 14:Economy



Source: INSETA Sector Skills Plan 2019-2020

The onset of the crisis has led to a collapse in economic activity, firm closures, tax revenue shortfalls, disruption of industries, job destruction, and distressed communities. The speed and spread of the virus is unprecedented in modern history. It has impacted on every aspect of life, including post-school education and training.

The National Treasury[38] states that *"the COVID-19 pandemic has led to a severe global economic crisis. The extent and duration of this downturn are uncertain: economic models are not well-suited to assess a global pandemic, and conditions are changing rapidly. As a result, all forecasts are highly uncertain and subject to change".*

South Africa's sovereign credit rating was downgraded to junk status by all rating agencies at the end of March 2020. The rating agency, Moody's, cut South Africa's rating to sub-investment grade, meaning the country now has a junk rating from all three major international rating agencies. Moody's cited the deterioration in SA's fiscal strength and *"structurally very weak growth, unreliable electricity supply, uncertainty over property rights, persistent weak business confidence and investment as well as long-standing structural labour*

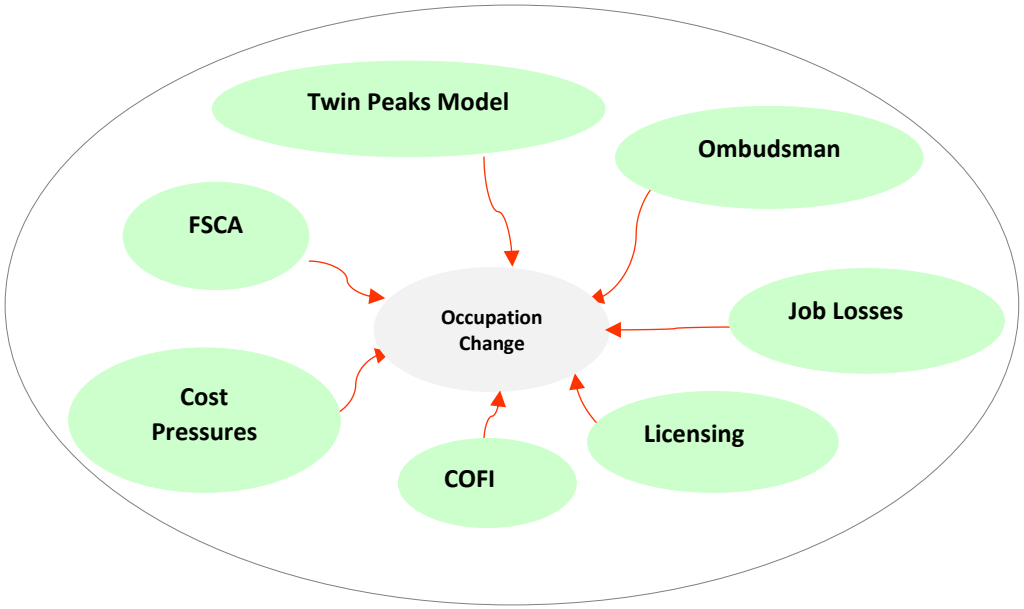
[38] National Treasury. 2020. Economic measures for COVID-19, May. Accessed at: http://www.treasury.gov.za/comm_media/press/2020/20200428_COVID_Economic_Responsefinal.pdf

market rigidities" for its decision to lower the country's rating to Ba1 from Baa3. Rival agencies Fitch and S&P downgraded SA to junk in 2017.[39]

8.1.4. Regulatory Environment

The regulatory framework for the insurance sector is undergoing fundamental change.

Exhibit 15: Regulatory Environment



Source: INSETA Sector Skills Plan 2019-2020

- The Insurance Act took effect from 1 July 2018 and will eventually replace the Long-term and Short-term Insurance Acts.
- National Treasury has established a working group to develop the Conduct of Financial Institutions (CoFI) Bill. It will provide the framework for licensing based on the type of activity (this relates to financial services offered). Secondary legislation under the Financial Sector Conduct Authority (FSCA) will include Insurance Notices, Policyholder Protection Rules (PPRs), other Regulations and Conduct Standards.
- As of 1 April 2018, South Africa became the eighth country in the world to adopt a Twin Peaks regulatory model.
- As a result of the enactment of the Financial Sector Regulation (FSR) Act, the following two regulators were established:

  - The Prudential Authority (PA) – responsible for maintaining stability in the financial system

[39] Cronje, J, Moody's cuts South Africa's credit rating to junk, 27 March 2020. Accessed at: https://m.fin24.com/Economy/just-in-moodys-cuts-south-africas-credit-rating-to-junk-20200327

-The Financial Sector Conduct Authority (FSCA) – responsible for market conduct and consumer protection. The Twin Peaks model will be implemented in two phases with primary and secondary legislation to be published under both regulators.

8.2 Implications for Occupational Change

The implications of the change drivers for occupational change and skills development in the insurance sector are the following:

OCCUPATIONAL CHANGE	SKILLS DEVELOPMENT IMPLICATIONS
▪ The mix of jobs is changing. ▪ Every occupation in the insurance sector is impacted by technology. ▪ New jobs and occupations are emerging or growing in importance. ▪ Some jobs and occupations are declining or becoming obsolete. ▪ The occupational structure is changing through skills biased technological change. ▪ Occupations that require information management and processing skills are growing, while those involving routine, repetitive tasks are declining. ▪ Occupations that require analytics, problem-solving, decision-making, judgment and critical analysis are growing. ▪ The cognitive and technological content of work, jobs and occupations are increasing. ▪ Changes like work disrupt traditional occupational classification systems. ▪ There is a shift in developing occupational clusters.	▪ There are attractive career opportunities for graduates who can work in technology areas such as cyber-security, blockchain, AI, predictive analysis, social media, digital marketing, open-source and machine learning. ▪ There will be less money in the training budget for firms, and the INSETA for skills development. ▪ Organisations will need to reprioritise training and make trade-offs. ▪ Intermediaries will need to be trained to sell products remotely. ▪ The sector should focus on short skills training courses to enable employees to work effectively in a post-COVID world. ▪ Training to enhance employees' digital capabilities – working remotely, especially in digital and screen-sharing tools. ▪ Employees should be developed to use the benefits of flexibility, freedom, and empowerment for job satisfaction in ensuring high productivity levels. If achieved, it will increase the work-life balance. ▪ Companies can also assess which employees are important to the business and adapt and innovate under trying conditions. ▪ Managers will also need to be trained to manage from anywhere instead of micro-managing staff. ▪ Employers will be able to source skills globally instead of relying on domestic skills stock.

9. INSURANCE VALUE CHAIN

A typical insurance value chain is depicted below:

Product Development	Marketing / Sales & Distribution	Policy Administration	Claims & Benefits	Asset Management
-New products -Product development -Delivery channels -Pricing -Prevention -Mitigation	-Promotion -Target markets -Customers -Channel marketing -Cross-selling -Upselling Customer relationship -Advertising	-Underwriting -Processing -Payments -Compliance -Workflows -Retention	-Claims processing -Electronic claims processing -Data management -Claims fraud -Settlement	-Financial modelling -Risks exposure and risk pools -Product risks
Technological Skills				
-Data extraction	-Data extraction -Machine learning -Intelligence self-service -Visualisation and reporting -Automated marketing and sales -Automated demand analysis -Webchat services	-Extraction of insights from multiple sources -Automation of processes	-Q&A service -Electronic claim applications -Prediction of claim volume patterns -Loss analysis -Automated claim fraud detection	-Predictive analysis -Artificial intelligence
DATA ANALYTICS ARCHITECTURE				
COMPANY STRUCTURE				
REINSURANCE				
HUMAN RESOURCE MANAGEMENT				
FINANCE AND RISK				

Occupations and skills in the insurance value chain are impacted by the following:

Digitalisation, replacing obsolescent technology and innovation: The PC took away the typing pool, which reduced one occupation but made the IT department much larger, creating new jobs. For example, auto insurers use telematics to capture real-time data on driving habits to manage risk and set rates better. This is called behavioural science.[40]

Job deconstruction: This is a counter-intuitive method of breaking a job into components and automating some or all of it. This is achieved through technology digitalisation or outsourcing through talent-on-a-platform (also called the gig economy).[41]

Changes in policy, legislation or regulation: We live in a country still ravaged by its past. Some companies have transformative agendas which seek to address transformation through race, gender and by employing more women, and people with disabilities. The changes like the *POPI Act* demand data be handled differently and with improved vigilance.

Process improvement or refinement: This usually derives through internal processes or suppliers. Each of these will require skills (upskilling, cross-skilling or reskilling).

Jobs impacted by digitalisation: Digitalisation in its simplest form automates certain repetitious parts of occupation(s) in the value chain. Digitalisation is one trend that is transforming every industry. The insurance sector is still to exploit the potential of digital technologies fully.[42]

Robotics Process Automation (RPA): The greatest focus will be around Robotics Process Automation (RPA), particularly in functions like finance, where processes are repeatable, regular and routine. Through RPA, businesses can automate these mundane rules-based business processes, enabling them to devote more time to serve customers or other higher-value work. Further, software robots ('bots') are also being deployed across the wider insurance enterprise to support management decisions, facilitate transactions, and even manage office security aspects.[43]

Artificial Intelligence (AI): Artificial Intelligence (AI) involves looking at big or complicated data through machine learning techniques. This finds relationships between variables. In insurance, AI improves business intelligence. AI is likely to impact insurance in three key areas:

[40] Moreau, F. (2013) 'The disruptive nature of digitisation: The case of the recorded music industry', International
[41] Muller, F., Naujoks, H., Singh, H., Schwarz, G., Schwedel, A. and Thomson, K. (2015) Global Digital Insurance
42 Eling, M. and Lehmann, M., 2018. The impact of digitalisation on the insurance value chain and the insurability of risks. *The Geneva papers on risk and insurance-issues and practice*, *43*(3), pp.359-396.
[43] KPMG. 2019. Robots have arrived in the insurance industry. Are you ready? https://assets.kpmg/content/dam/kpmg/au/pdf/2017/the-robots-have-arrived-fs.pdf

automation of insurance processes, such as claims and underwriting; improved understanding of business risks; and increased direct interaction with customers.

AI and Chatbots: Insurers are deploying chatbots rather than humans, to enhance to help customers select the right coverage. One chatbot is "Allie" from Allianz which is available 24/7 to answer questions about insurance products. This Cloud time-and-location-independent service greatly assists companies operating across time zones. [44]

Big Data, IoT and Cloud Computing: This can use large data sets or unstructured data from social media, telematics, and sensors to determine driver, professional or client health information in real-time. A blockchain alliance has been formed between Aegon, Allianz, Munich Re, Swiss Re and Zurich to analyse these technologies' potential. This will create high-end jobs.

All companies are using cloud computing. Mobiles are pervasive, and companies now allow clients to monitor their claims through the apps. Some companies have no bricks-and-mortar office for clients to walk into as all engagements are conducted online.

Insurance activities severely impacted by digitalisation: KPMG, in particular, suggests that the following four insurance-related activities will be automated.[45].

Underwriting - The sector will see upward automation in needs analysis, underwriting and suitability analysis to determine the appropriate insurance products. The data sources and maturing AI technologies allow the application process for automated insurance services.

Customer service: Customer service is a huge potential for automation, although technology is optimised. Customers are frustrated because they talk to robots.

Data Entry: Small to medium-sized companies rely heavily on Google, Amazon and others for research investments, resulting in research and data roles being automated. While bigger companies conduct research, smaller product companies will not get bogged down by building "in-house" capabilities but will instead leverage offerings from bigger players to bring enhanced products to market.

Outbound sales*:* Outbound sales continue to be automated. There are now AI bots that initiate a conversation. Only when the leader demonstrates interest is the opportunity passed to an employee to follow the lead. This shifts the call from a cold outbound leads to a warm inbound lead.

Job deconstruction: It is now possible for insurers to deconstruct jobs into algorithmic "component tasks."[46] and choose which tasks to automate through digitalisation or outsourcing through the gig economy[47]. In this context, digitalisation is called cognitive

44 Ibid.

[45] Ibid.

[46] An algorithm is a process or set of rules to be followed in problem-solving operations.

[47] This is also called the platform economy or talent-on-a-platform.

automation. This is a non-trivial decision, and an expert system or framework is recommended to make such a decision.

Companies may now complete the deconstructed component tasks of the job faster, better and cheaper. We have outsourcing centres which are *offshore* (e.g. India), *onshore* (e.g. Cape Province) or *nearshore* (e.g. Kenya). This trend has created a functional short-term work relationship which challenges our traditional view of jobs and full-time employment. This introduces the notion of micro or short-term contracts. Companies that deconstruct and distribute jobs work often realise savings between 60% to 80% range more than the 30% typically achieved through outsourcing. [48]

Cognitive automation: In the context of insurance, cognitive automation uses computer science techniques such as AI techniques, machine learning, cognitive computing, speech recognition and natural language processing to automate business processes or deconstruct jobs normally performed by humans.

Here are some examples:

Instead of an agent assessing vehicle damage following an accident, photos of damaged parts are taken with a cell phone and submitted to the insurer. AI-powered systems then recognise and assess the damaged parts and look up what was paid for similar claims in the past to make a pay-out determination. This is sent to a human agent for approval. This process improves the accuracy of the claims processing, reduces claim handling time, while further enhancing customer experience. This streamlined process dramatically reduces processing claims cost.

Property insurers use drones to inspect structural damage after turbulent weather, reducing the claim processing time by over 80%.

Auto insurers have transferred work to the insured by providing clients with self-help mobile apps which enable them to submit claims, query, pay bills and get roadside assistance. It reduces the burden on agents.

A Decision-making Framework: Organisations need to rethink work. It is not just about human replacement but managing risk and institutional knowledge in a complex business.

The following metrics may be considered in weighing different possibilities:

***Speed**:* *Developing new capabilities for competitive advantage.*

***Cost**:* *Optimising the mix of fixed and variable costs.*

Risk: *The new capabilities must not arrive with unnecessary risk.*

[48] Boudreau, J.W., Jesuthasan, R. and Creelman, D., 2015. *Lead the Work: Navigating a world beyond employment*. John Wiley & Sons.

Procedure: One should identify jobs in areas of an organisation experiencing difficulties in attracting or retaining employees. For instance, advanced analytics hinges on getting the right data science talent. One may then deconstruct this analytical job into tasks and then access world-class talent via a gig economy platform.

10. RESEARCH FINDINGS

a) Delphi Study

The Delphi Method is employed in this study. It forwards a series of questions to the insurance industry experts. After each round, a summary of the responses is shared with respondents for further comments. When a saturation point is reached, the questions are stopped.

In the first round of questions, 22 insurance experts responded. In the second round, there were 04 responses. At this point, the questions were stopped.

b) Participants

The following experts participated in the study:

NO	NAMES	COMPANIES
1	Elias Mahlangu	ASSUPOL
2	Salome de Fontaine	Chartered Auto Underwriting Agency (Pty) Ltd
3	Estelle Henry	Commercial & Industrial Acceptances (Pty) Ltd
4	Edward Dunn	EEC TVET College
5	Nico Smit	Emerald Life (Pty)Ltd
6	Nico Kleynhans	Northwood Financial Services
7	Abbot Pfukwa	Octomate
8	Jo-Ann Fourie	Plan for Life PTY LTD
9	Xolani Buthelezi	Scarlet Capital
10	Vicki Steenkamp	Transfin
11	Hazel Ngubelanga	Credit Guarantee Insurance Corporation
12	Lisa Butler	AMS Haven T/A Donald Insurance Brokers
13	Bianca Howard	RESILEA (PTY) LTD
14	Jason van der Merwe	Credit Guarantee Insurance Corporation (CGIC)
15	Nozibel Lucy Zibi	Old Mutual Insure
16	Glenn Burjins	Holistic Compliance Management Solutions
17	Marzaan Steenkamp	Platinum Life (Pty) Ltd
18	Zolani Lugawe	SA Taxi Protect
19	Bobby Pillay	Structured Wealth Management (Pty) Ltd

20	Karen Jevon	Sedgwick South Africa
21	Melonie Phillips	The Best Funeral Society
22	Yegalan Chetty	Y Chetty Financial Consultants

c) Participating Company Size

The employee size of companies that participated in the survey are the following:

Employee Size	Number Participating
1-50	9
51-149	4
150+	9

d) Round One Questions

Experts were given the following instructions:

1. You can identify several occupations undergoing **significant occupational changes.**
2. We define **significant occupational change** as an occupation where over **25%** of the job tasks performed in the occupation have either changed or are changing. Occupational changes mean job tasks are added to, or eliminated from, the occupation.
3. Complete a **new template** for each occupation identified.
4. Avoid listing occupations with low or moderate changes.
5. If you have identified several occupations undergoing significant change, we suggest that you consult an **experienced person** in that occupation in your company to complete the template. This ensures occupational expertise and insight into the responses.

Experts were required to measure occupations by completing the following template:

This template should be completed per occupation.	
Name the occupation that is undergoing significant changes. (Over 25%	

change)	
What changes are taking place in terms of work tasks for this occupation? (Describe)	
What factors/reasons are driving these changes? (Causes of changes)	
What new skills/competencies are required in this occupation (List it)	
What training interventions are required? (Discuss what should be done?)	
Any other comments regarding this occupation?	

Experts identified occupations undergoing significant change, which was carried over to Round 2 of the study.

e) Round Two Questions

Based on the identified occupations undergoing significant change in Round One, the following was asked in Round Two.

The following occupations were identified as undergoing significant change:

No	Name the occupation that is undergoing significant changes.	What changes are taking place in terms of work tasks for this occupation?	What factors/reasons are driving these changes?	What new skills/competencies are required in this occupation?	What training interventions are required?	Discuss what should be done?	Any other comments regarding this occupation?
1	**Training** *-Training Officer* *-Learning & Development Manager* *-Facilitator*	-Medium of delivery has changed. -Online training has replaced contact training.	-Technology -Recent lockdown regulations: ▪ There is an increased need to make training more accessible. ▪ With the younger working population, training is aligned with their personalities. ▪ Recent changes to legislation (BN194 – record-keeping). -Changing nature of work.	-Ability to design online learning material to deliver training on virtual platforms. -Advanced computer literacy skills, digital, facilitation and record-keeping. -Digital transformation and upskilling.	-To provide the necessary skills for trainers to engage and deliver training on various online platforms. -Train the trainer courses for digital training to be completed. -Better system to deliver facilitation.	-Upskill trainers to deliver online training.	-Invest more in resources and training.
2	**Marketing and Sales** *-Sales Rep* *-Marketing & Sales*	-Online sales are growing.	-Social environment -COVID-19.	Technological savviness and the ability to use systems available to conduct sales online as well as computer literacy. -Digital marketing and social media training	-End-user computing management and new standard operating procedure.	-New operating procedures.	This is one of the key roles that we need to develop staff continually as support services.

3	**Management & Administration** *-Business Manager* *-Administrator* *-Data Capturer* *-Clerk* *-Short term Insurance Manager*	-Managers expected to lead and manage staff by incorporating new ways in which business functions, - New legislation. -Sales agents have migrated to the online application. -Going digital and remote working. -Good information technology skills, ability to use online platforms like Zoom and Teams to conduct virtual meetings with customers.	-Continuous changes and amendments to legislation and compliance. -Covid-19 pandemic. -Compliance Officer courses to train potential compliance officers and assistants. -Teaching the legislation applicable to the industry they are in and how to implement it. -Training to become a compliance officer.	-Leadership and change in management style. -Understanding legislation. -Information technology. -Enhanced Computer Literacy. -Compliance, knowledge of the regulations, managerial skills.	-Development programmes. -Compliance training. -Embrace 4IR and Paperless environment. -Cloud-based server applications.	-Allow managers to engage in development programmes. -Admin assistants need to become internal compliance 'officers' to assist financial planners. -Training on adapting to cloud-based operations and mirroring email accounts.	-Managers are leaders of change. Thus we should invest in their development. -Admin has become more intensive. -More than the usual 8 hours are being required to fulfil admin obligations. -Recognising the importance of employing a competent compliance officer or learning the skills if the business is very small.

No	Name the occupation that is undergoing significant changes.	What changes are taking place in terms of work tasks for this occupation?	What factors/reasons are driving these changes?	What new skills/competencies are required in this occupation?	What training interventions are required?	Discuss what should be done?	Any other comments regarding this occupation?
4	**Financial Planning** *-Financial Advisor* *-Financial Planner*	-Interaction with clients has to be conducted electronically, as opposed to face-to-face.	-Current Covid-19 epidemic which precludes or advises personal contact, encouraging social distancing. -Twin Peaks laws and regulations.	-Use of electronic communication such as Zoom for contacts with clients; Electronic transmittal and receipt of documents. -Digital marketing and social media training. -Greater knowledge of Behaviourism. -More coaching skills -To carry out work competently, financial advisors have to embrace legislative changes and regularly upskill themselves. -Introduce programs to skill personnel in the use of electronic communication methods in conducting business. -Enhanced time management and CRM software.	-Introduce programmes to skill personnel in the use of electronic communication methods in conducting business. -Our existing training content is ten years behind requirements. -Showing advisors how the analyse a portfolio and appropriately advise according to the client's needs. -Training institutions introduce short programmes to cater for the above.	-The introduction of computer-based programmes, especially for administrative staff, so that the above is easily understood. -We need to review the full spectrum of training.	-Transformation in our industry demands more research of FSCA requirements. -Currently working 15 hours plus per day to cope with client demands.

No	Name the occupation that is undergoing significant changes.	What changes are taking place in terms of work tasks for this occupation?	What factors/reasons are driving these changes?	What new skills/competencies are required in this occupation?	What training interventions are required?	Discuss what should be done?	Any other comments regarding this occupation?
5	**Claims:** *-Claims Processor* *-Claims assessor* *-Insurance Assessor: Commercial Short term Insurance* *-Short term Insurance Broker – Claims representative*	-Remote out of office administration and remote client liaison -The following tasks have been introduced to the claims assessing process: - Customer due diligence: Ensuring that AVS and Astute checks are done on the claimant and deceased as per FICA requirements. - Verifying whether doctors and undertakers appear on sanction lists as supplied by insurers. - Record-keeping: Having physical copies of assessing checklists and placing on the system for record-keeping purposes. Administrative to lose adjustor / investigative role. Use of Drones.	-COVID-19. -Changes in legislation. -For instance, Amended FIC Act and BN194 -Automation of the claims system. -Technological advancements in drone technology. -Legislative changes introduced by the FSCA require policy implementation at ground level, i.e., brokerage.	-Time management -Ability to operate independently. -Online meeting etiquette. -Policy knowledge, people and negotiation skills -Drone License. -More onerous regulatory requirements due to amended legislation about the protection of personal information.	-Personal skills training. -Internal product and process training. -Class of business online training in conjunction with internal training. -Short course on IT skills development.	-Ability to operate independently. -Compliance -Diploma, Degree, short courses on compliance, workshops.	-Online meeting etiquette. Compliance training, attending Insurance industry workshops and doing management courses.

No	Name the occupation that is undergoing significant changes.	What changes are taking place in terms of work tasks for this occupation?	What factors/reasons are driving these changes?	What new skills/competencies are required in this occupation?	What training interventions are required?	Discuss what should be done?	Any other comments regarding this occupation?
6	Short-term insurance Compliance Officer	-COVID 19 is the initial driver, which is influencing future customer behaviour and attitudes.	-Recognition of the importance of compliance legislation to regulate insurance entities more strictly.	-The government has recognised the importance of protecting an individual's data and the need to align with international standards.	-	-	-
7	**Insurance** *-Reinsurers* *-Insurers* *-Underwriting -* *Managing Agencies* *-Brokers*	-Changes to Insurance and Reinsurance policy wordings and additional clauses being added due to the current pandemic. -Uncertainty due to pending Court Cases Insurers and Reinsurers' balance sheet under pressure. -Claims staff being placed under pressure to pay claims.	-Current Pandemic / National Lockdown	-Good Negotiators / Mediators.	-New policy wording introduced and approved with unknown timelines.	-	-
18	Design and Marketing	-Much more online, working on website designs and online platforms.	-Current working situations influenced by COVID 19 pandemic.	-Shift to online platforms, learning more about digital marketing.	-More training in WordPress.	-	-

No	Name the occupation that is undergoing significant changes.	What changes are taking place in terms of work tasks for this occupation?	What factors/reasons are driving these changes?	What new skills/competencies are required in this occupation?	What training interventions are required?	Discuss what should be done?	Any other comments regarding this occupation?
19	Technical Underwriting	-Back end System is doing the underwriting and pricing of the policy.	-We have built-in algorithms and predictive intelligence that can predict the behaviour of our customers. It can accurately inform us, high-risk client; we can then price their policies correctly	-Artificial Intelligence; data analytics, big data.	-Machine learning and Big Data competencies will be required.	-Digital training will be required.	-New normal has forced our business to do things differently.
24	Loss Adjusting	-Some online technology is being deployed to replace the more traditional form of loss adjusting.	-Cost factors, Covid-19, convenience, efficiency.	-More advanced IT skills, communication skills.	-Communication skills, Vulnerable Customer skills, advanced IT skills.	-	-The above changes are positive for our industry as the change in the more traditional form of loss adjusting suits the younger professionals who are more comfortable with the oncoming 4IR.

NOTES TO COMPLETE THIS SURVEY

Keep in mind that there are **four directions** in which occupations are changing:

1. **UP:** You need **more** knowledge and skills to perform competently in the occupation. For example, a “claims administrator” needs computer and data skills to communicate with claimants and track claim types. This is referred to as “upskilling”.

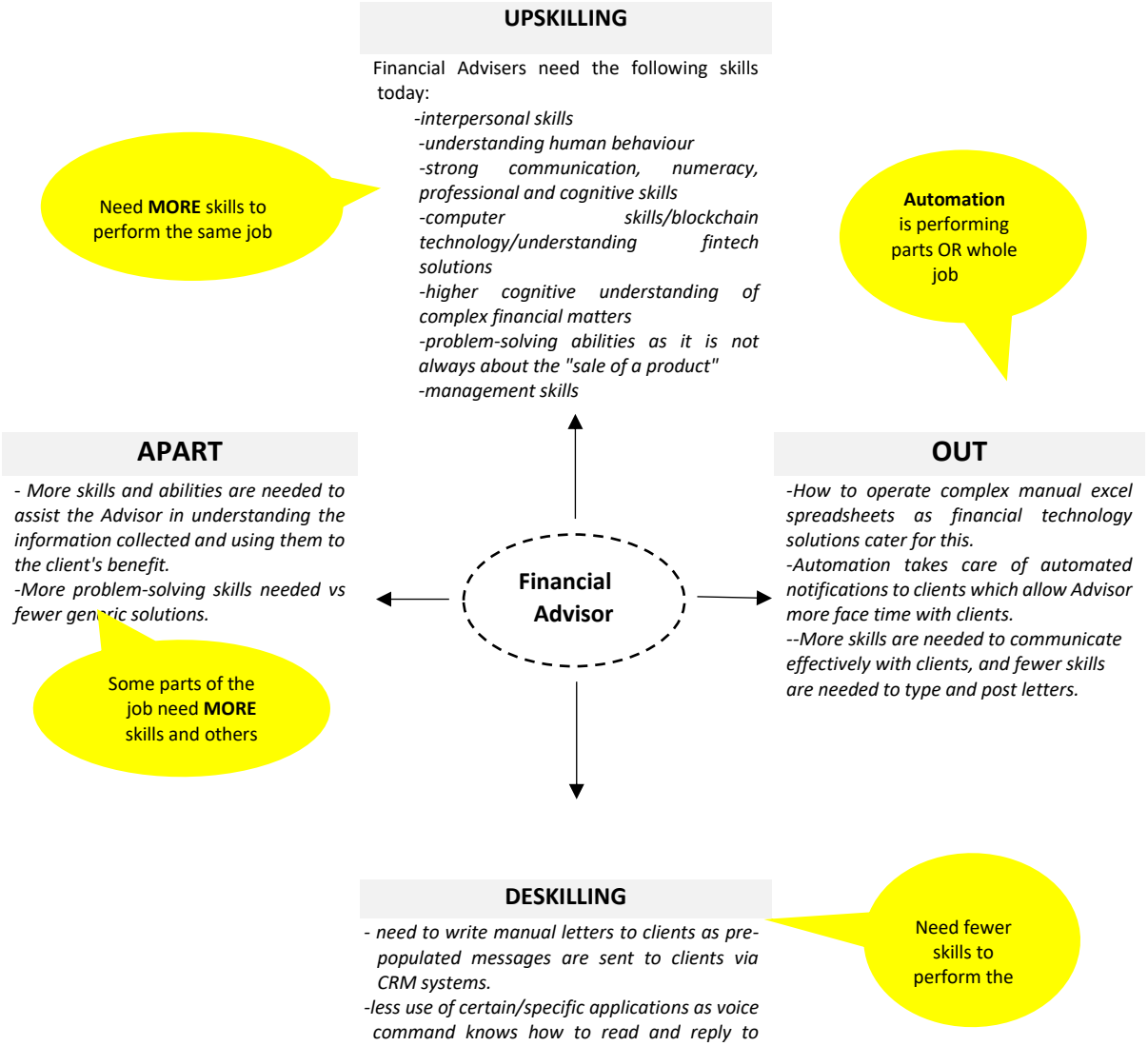
2. **DOWN:** Occupations, jobs, skills and knowledge tend to become obsolete with technological advancements and require fewer skills. For example, the "claims administrator" may require less writing skills, since they have access to preformatted templates that saves writing. This is referred to as “deskilling”.

3. **OUT:** Automation will **compete** with humans for jobs. For example, call centre workers are being replaced by automated voice recorders to support clients with queries. Automation may also take part in a client centre workers job rather than the whole one.

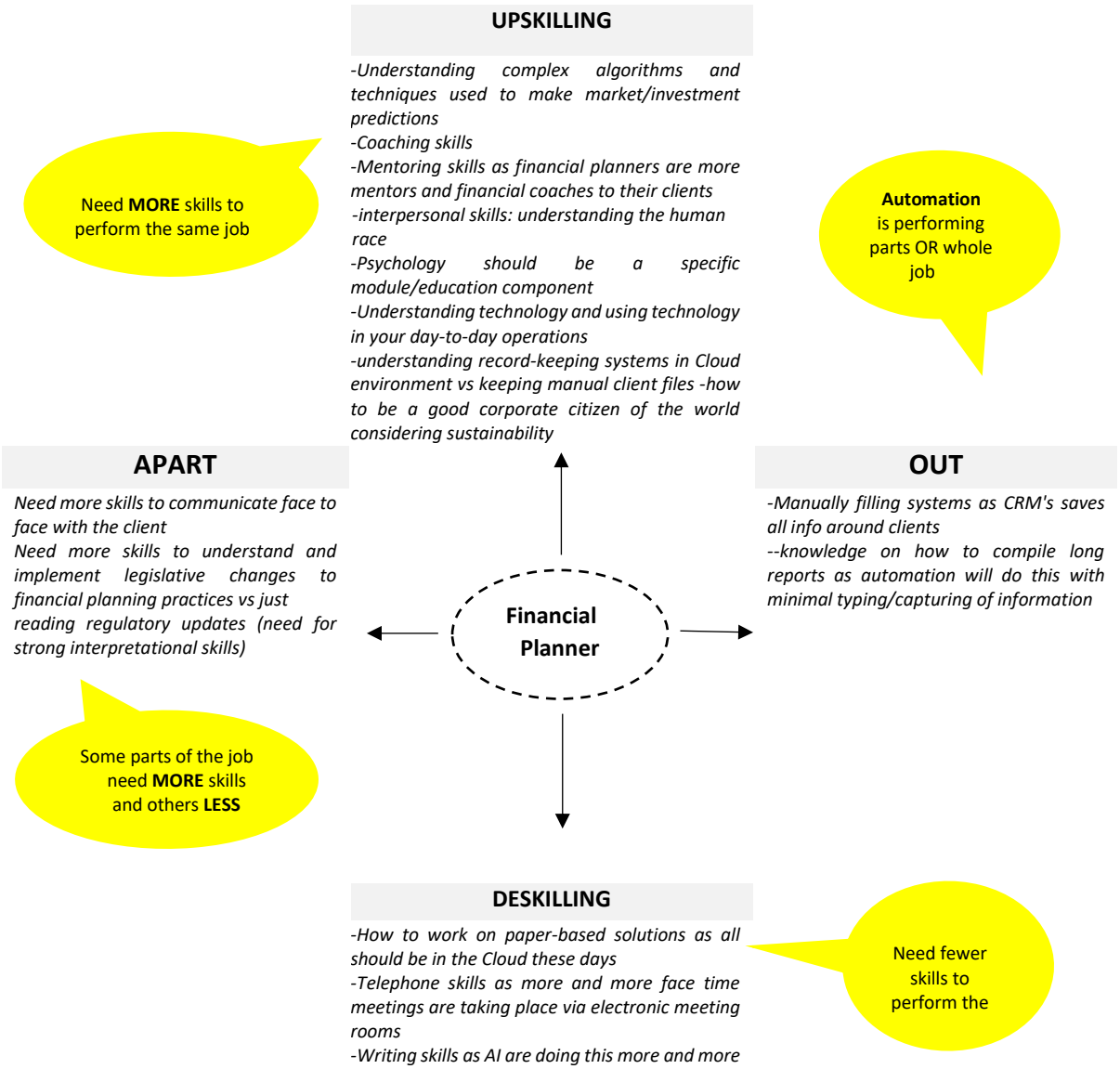
4. **APART:** The skilled parts of a job will require **more** skills and knowledge, while the unskilled parts will require even **less.** The "claims administrator" needs more skills to operate a computer, but fewer skills to write.

f) Round Two Responses

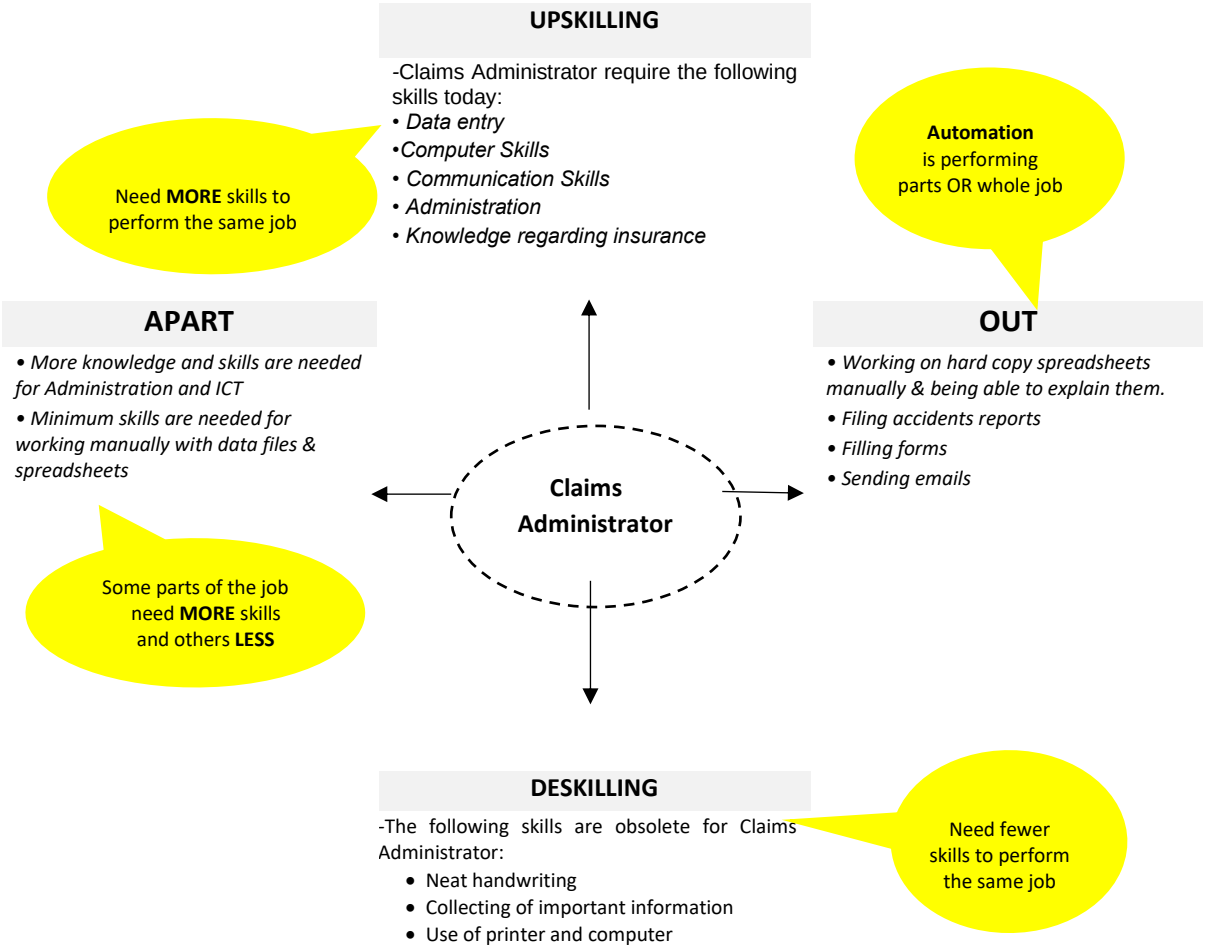
FINANCIAL ADVISOR



FINANCIAL PLANNER



CLAIMS ADMINISTRATOR



INSURANCE AGENT

UPSKILLING

Insurance agents require the following skills today:

- Positive attitude
- Communication
- Customer service
- Patience and persistence.

Need **MORE** skills to perform the same job

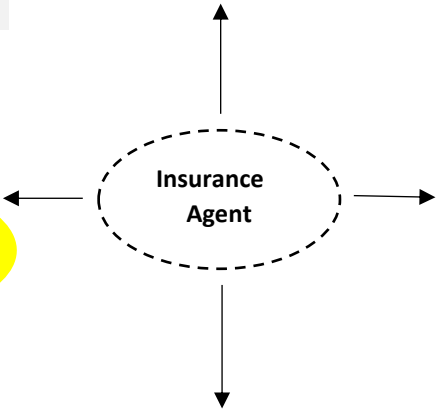
Automation is performing parts OR whole job

APART

- Entrepreneurial spirit
- High energy
- Coachable

OUT

- Invest in your work
- Create a winning environment
- Invest in yourself



Some parts of the job need **MORE** skills and others **LESS**

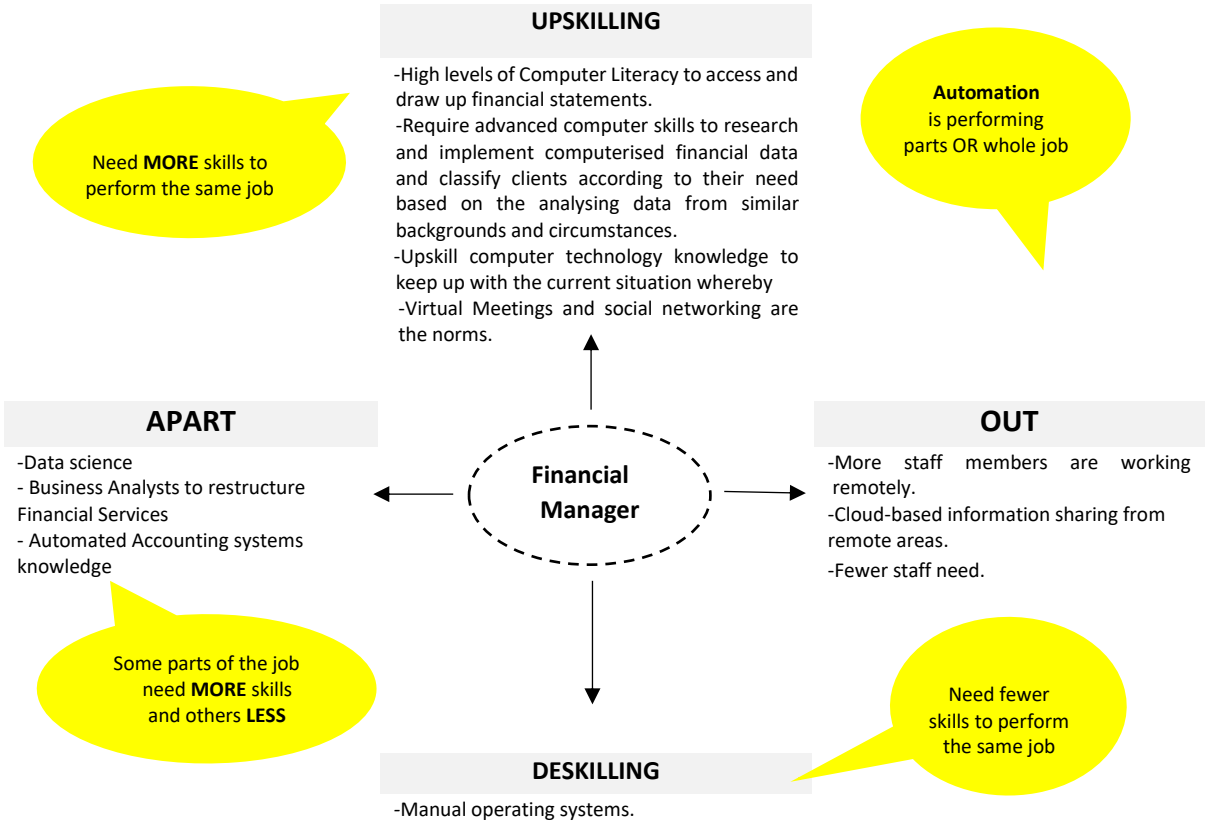
DESKILLING

-The following skills are obsolete for an Insurance agent:

- Put the needs of the client first
- Good customer service
- Emotional intelligence
- High energy level

Need fewer skills to perform the same job

FINANCIAL MANAGER



The scope and pace of occupational change are accelerating. The Organising Framework of Occupations must, therefore, be updated frequently. It will need to be transformed from a backwards-looking tool that describes and classifies occupations to more a forward-looking analytic tool that generates options for how occupations might be structured in the future.

11. RECOMMENDATIONS

In this section, there are two types of recommendations. First, a set of general recommendations for INSETA and its stakeholders to consider for incorporating the phenomenon of occupational change into its activities. Second, a toolkit can be distributed to human resource practitioners and companies in the insurance sector to measure and document occupational change.

11.1 General Recommendations

INSETA should consider the following recommendations:

Developing skills to measure occupational change: Workshops should be held with insurance companies to present the occupational change toolkit. Companies should be encouraged to use the toolkit and record findings of occupational change.

Measuring occupational change for existing and new qualifications: There should be a study to measure occupational change before developing new qualifications and revising existing ones that apply to designated occupations. These findings should inform the qualification development process.

Expanding short courses: There should be an increasing focus on short courses and micro-learning to enable employees to keep abreast with changes in the work settings and external environment.

Focus on a limited number of occupations: INSETA should identify and focus on measuring the occupational change in a limited number of key occupations in the sector, instead of all occupations. These key occupations should be identified from the Sector Skills Plans and consultations with stakeholders.

Work analysis of the impact of technology: The impact of technology on occupations in the sector should be analysed and fed into qualification development.

PESTEL Analysis: The INSETA Research and Development Committee should be given the task of overseeing the following:

- Review and analyse the PESTEL forces that contribute to understanding the nature and structure of work, jobs and occupations.
- Identify key issues in the changing context and content of work that affect the design of occupations.
- Evaluate the changes in the tools for analysing the nature of the work environment and developing occupational profiles that are responsive to the workplace's current and future needs.
- Assess the application of methods and tools developed to measure occupational change.

Reimagining work: New skills, new roles, and new ways of working will be needed. Three steps will be essential for creating the insurance workforce of the future:

Step 1: Reimagine work to understand better how machines and people can collaborate.
Step 2: Pivot the workforce to areas that create new forms of value.
Step 3: Scale-up 'new skilling' to enable people to work with intelligent machines.

Map skills to new roles: Once there is a full list of required tasks, skills and newly defined roles, it can be mapped to the list against the skills present in your workforce. The gaps can be addressed through training or sourcing, including drawing on contract workers in the short-term.

Digital Platform: The occupational change templates should be available to all companies in the insurance sector on a digital platform for ease and speed.

11.2 Toolkit for Measuring Occupational Change

There are many examples of occupational analysis reports across a range of occupations in the literature. Many of these are posted by professional organisations that have used occupational analysis to define their respective professions' components.

A review of these various sources of information suggests that occupational analysis has been used in three basic ways.[49]

11.3 Entire Occupation

Analysing the components of an entire occupation appears to be the most frequent use of occupational analysis. Using occupational analysis to document the commonalities of a group of related jobs occurs across different work settings.

There seems to be no standard format for presenting a report on the occupational analysis information. Each situation calls for a somewhat different format, based on its intended use. In general, occupational analysis reports typically have some or all of the following sets of information:

[49] Balasa, D. A. (2015). Occupational analyses: Why such studies are important for examination and curriculum development. July–August. *CMA Today*, pp. 5–7.

ENTIRE OCCUPATION REPORT TEMPLATE	
1	**Title of the occupation**
2	**Level of the analysis** (whether the analysis is targeted to an entrant to the occupation, an experienced employee, or an expert employee)
3	**General description of the occupation**
4	**Relevant jobs that comprise the occupational title**
5	**Forecasts of future job openings**
6	**Pathways from other occupations to this occupation**
7	**Qualification structure** (Sequence of the training programmes based on the analysis)
8	**Credentialing information** (The qualification structure leads to a certificate or a license of some kind)
9	**Prerequisite areas of knowledge and skill** (required for learning the occupation)
10	**Characteristics of productive employees in the occupation** (including interpersonal skills and other assumptions about the individuals)
11	**Cross-reference information** (on the training for this occupation to other Occupations)
12	**Learning outcomes and performance criteria** (for each of the learning outcomes)
13	**Areas of competence** (related to the occupation, often stated in the form of duties and tasks)
14	Entire Occupation Report Template **range** (as the occupation occurs in different settings)

11.4 Area of Competence Across Certain Occupations

Another use of occupational analysis is to document specific areas of competence, considered to have some importance, that occur across occupations, or a cluster of occupations. That is, analysing a certain aspect that occurs across more than one occupation, and not necessarily analysing the entire occupation.

Focusing on specific areas of competence across occupations often provides a more strategic perspective of the occupations. In this sense, there seem to be some advantages for using this more limited approach to analyse occupations. For one thing, it signals which areas of competence should be emphasised for future training and education programmes. It provides trainees with greater flexibility in their occupational choices since they can ascertain how occupations are interconnected and then target more than one occupation. Finally, focusing on competence forms the basis of establishing standards from which an occupational framework can be devised.

AREAS OF COMPETENCE ACROSS CERTAIN OCCUPATIONS REPORT	
1	**Area of competence** (duty or task statement)
2	**Overview of the area of competence** (a context for the work involved)
3	**Prerequisite knowledge and skills**
4	**Knowledge-level learning outcomes**
5	**Occupational clusters**
6	**Relevant occupations** (that comprise the area of competence)
7	**Framework** (showing how this area of competence relates to other areas of competence, and the pathways to acquire this area of competence)
8	**Credentialing information** (whether the qualification structure leads to a certificate or a license)
9	Career guidance (on selecting this occupation for future study)

11.5 Prerequisite Knowledge and Skills

The final type of occupation analysis that has emerged is documenting specific prerequisite knowledge and skills that support individuals when performing in one or more occupations. These reports are often the most general in nature, leading some informed readers to question whether the document represents an occupational analysis or whether the reports simply state information of interest. To be clear, such reports should clarify what role the information in the report plays in understanding an occupation. Because of its general nature, the information in this type of occupational analysis might relate to more than one occupation.

11.6 Conducting an Occupational Analysis

The general process for conducting an occupational analysis is based on the broader work analysis process. The following discussion introduces each phase of the process and then comments on the components that comprise each phase.

PROCESS FOR CONDUCTING AN OCCUPATIONAL ANALYSIS	
I.	**Plan the occupational analysis**
a.	***Specify the purpose of the analysis:*** *In the context of occupational analysis, the purpose statement focuses on whether the focus will be on an entire occupation or an area of competence within a set of related occupations.*
b.	***Decide which techniques will be used:*** *Based on the purpose of the analysis, the various work analysis techniques should be considered, and the appropriate ones identified. For instance, beyond using the occupational analysis technique, there may be instances in which the critical incident technique may be appropriate.*
c.	***Develop a proof of concept prototype:*** *Developing the proof of concept would help maintain the analysis's focus, as it is being conducted. For instance, the proof of concept could show the format used to present the information later on.*
II.	**Select the sources and the methods**
a.	***Select the sources and methods of gathering information:*** *The next phase of the occupational analysis process is to select the sources of the information and the methods of gathering the information.*
III.	**Conduct the occupational analysis**
a.	***Review the technique-specific process:*** *The analyst should carefully plan out the sequence of the techniques used.*
IV.	**Prepare the final report**
a.	***Prepare the report's draft version****: After the data gathering, a draft report needs to be prepared.*
b.	***Review the report:*** *The completed draft report should be distributed to the various stakeholders for review and feedback.*
c.	***Prepare the final version of the report:*** *Upon completing the review, the report's final version can be prepared.*

It is imperative that INSETA makes occupational analysis a regular part of its skills development activities.

Too often, employers remark that graduates have to be retrained in the workplace because what they have studied does not resonate with the knowledge and skills required for occupational proficiency.

The qualification development process of the QCTO is resource-heavy, time-consuming and lags behind changes in the insurance sector.

Occupational analysis is a cost-effective and efficient way to align qualification development and occupational profiling to occupations.

An occupational analysis for a specific occupation can be conducted in a workshop setting within hours by a group of occupational experts for that occupation.

A good starting point would be to conduct occupational analysis of the Top Ten Priority Occupations of INSETA, namely:

TOP 10 SECTOR PRIORITY OCCUPATIONS IN INSETA SECTOR SKILLS PLAN				
Insurance Agent	**Actuary**	**Software Developer**	**Insurance Broker**	**Developer Programmer**
Insurance Loss Adjuster	**Claims Administrator**	**Financial Investment Advisor**	**Compliance Officer**	**Sales and Marketing Manager**

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