



MSIC C15 : MANUFACTURE OF LEATHER AND RELATED PRODUCTS

2024



KEMENTERIAN SUMBER MANUSIA

OCCUPATIONAL FRAMEWORK

MSIC C15

SECTION C : MANUFACTURING
DIVISION 15 : MANUFACTURE OF
LEATHER AND RELATED
PRODUCTS



Jabatan Pembangunan Kemahiran
Kementerian Sumber Manusia, Malaysia
Department of Skills Development
Ministry of Human Resources, Malaysia



OCCUPATIONAL FRAMEWORK
SECTION C: MANUFACTURING
DIVISION 15: MANUFACTURE OF LEATHER
AND RELATED PRODUCTS

First Printing 2024

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Ministry of Human Resources

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Published in Malaysia by

Department of Skills Development (DSD)
Level 7-8, Block D4, Complex D
Federal Government Administrative Centre
62530 Putrajaya, Malaysia
[http:// www.dsd.gov.my](http://www.dsd.gov.my)

Printed by

UPUM Resources Sdn Bhd (989963-D)
Aras 6, Kompleks Pengurusan Penyelidikan dan Inovasi
Universiti Malaya, Wilayah Persekutuan Kuala Lumpur,
50603 Kuala Lumpur
Tel: +603 7967 3556

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Occupational Framework
C15 Manufacture of Leather and Related Products
ISBN 978-967-2393-40-5

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ABSTRACT

An Occupational Framework (OF) is the outcome of an Occupational Analysis that identifies the competencies within the work scope of an occupational area. It is used to analyse the competency requirement for skilled human resources within a specific industrial sector. This OF is developed for the Manufacturing of Leather sector; which is based on the Malaysia Standard Industrial Classification (MSIC) 2008 under Section C: Manufacturing; Division 15: Manufacture of leather and related products; Group 151: Tanning and dressing of leather, manufacture of luggage, handbags, saddlery and harness dressing and dyeing of fur, and 152: Manufacture of footwear. The study utilised a qualitative inquiry to gain an in-depth understanding of achieving the deliverables of this OF, namely the Occupational Structure, Occupational Responsibilities and Occupational Descriptions. It also identified the jobs in demand, critical jobs, competencies in demand, jobs relevant to technology and industrial revolution, and the emerging skills. The research involved various methods, such as document reviews, interviews, non-participatory observation, Focus Group Discussion (FGD) and industrial benchmarking visit. The study identified 24 job areas and 97 job titles, with 44 job titles being relevant to technology and industry revolution and no critical job title was identified for this particular sector. The OF will serve as the basis of reference for the development of National Occupational Skills Standard (NOSS) document.

ABSTRAK

Kerangka Pekerjaan (OF) adalah hasil daripada Analisis Pekerjaan yang mengenal pasti kecekapan dalam skop kerja sesuatu bidang pekerjaan. Ia digunakan untuk menganalisis keperluan kecekapan sumber manusia mahir dalam sektor perindustrian tertentu. OF ini dibangunkan untuk sektor Pembuatan Kulit; yang berdasarkan Klasifikasi Industri Standard Malaysia (MSIC) 2008 di bawah Division C: Pembuatan; Bahagian 15: Pembuatan kulit dan barangan yang berkaitan; Kumpulan 151: *Tanning and Dressing of Leather, Manufacture of Luggage, Handbags, Saddlery and Harness Dressing and Dyeing of Fur*, dan 152: Pembuatan Barangan Kasut. Kajian ini telah menggunakan pendekatan analisis kualitatif untuk untuk mendapatkan pemahaman yang mendalam bagi mencapai objektif OF ini, iaitu mengenalpasti Tajuk Pekerjaan, Tanggungjawab Pekerjaan dan Huraian Pekerjaan. Ia juga mengenal pasti bidang pekerjaan yang kritikal dan pekerjaan yang berkaitan dengan teknologi dan revolusi perindustrian serta kemahiran baru. Kajian ini melibatkan beberapa teknik pengumpulan data seperti semakan dokumen, temubual, pemerhatian tidak serta, sesi Bengkel Perbincangan Kumpulan Fokus (FGD) dan lawatan penanda aras di industri. Kajian ini telah mengenalpasti 24 bidang pekerjaan dan 97 tajuk pekerjaan, beserta 44 tajuk pekerjaan dikenal pasti relevan dengan teknologi semasa dan revolusi perindustrian serta tiada tajuk pekerjaan diklasifikasikan sebagai pekerjaan kritikal untuk sektor ini. OF ini akan digunakan sebagai rujukan bagi pembangunan dokumen Standard Kemahiran Pekerjaan Kebangsaan (NOSS).

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ABBREVIATION

DKM	Diploma Kemahiran Malaysia/ Malaysian Skills Diploma
DLKM	Diploma Lanjutan Kemahiran Malaysia/ Malaysian Skills Advanced Diploma
DOSM	Department of Statistics Malaysia
DSD	Department of Skills Development
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GDS	Global Distribution System
GPN	Global Production Network
GVC	Global Value Chain
HRD Corp	Human Resource Development Corporation
IMP3	Third Industrial Master Plan
ISIC	International Standard Industrial Classification of All Economic Activities
MASCO	Malaysia Standard Classification of Occupations
MFMA	Malaysian Footwear Manufacturers Association
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade and Industry
MOSQF	Malaysia Occupational Skills Qualification Framework
MOTAC	Ministry of Tourism Arts and Culture
MSIC	Malaysia Standard Industrial Classification
NOSS	National Occupational Skills Standard
NTP	National Transport Policy
OA	Occupational Analysis
OD	Occupational Description
OEM	Original Equipment Manufacturer
OF	Occupational Framework

OR	Occupational Responsibility
OS	Occupational Structure
PTPK	Perbadanan Tabung Pembangunan Kemahiran/ Skills Development Fund Corporation
SOCISO / PERKESO	Social Security Organisation/ Pertubuhan Keselamatan Sosial
SPKM	Sistem Persijilan Kemahiran Malaysia
WIM	Written Instructional Materials

GLOSSARY

Competency in Demand	Refers to the ability required in performing the tasks efficiently according to the industry requirements.
Critical Job	Job in demand and highly sought after but hard to fill due to the nature of the job which require certain skills set or experience.
Emerging Skills	Skills predicted to be imperative to the industry in the near future, based on the recent development, trend or study
Industry 4WRD	It is a financial support facility for Malaysian SMEs in the manufacturing and related services sectors to embrace Industry 4.0
Jobs	Total labour required by establishments to produce goods and services at a given point of time, which is comprised of filled job and vacancies.
Job Demand and Supply	Refer to job vacancy registration and active job seekers.
Job Description	Defined as a summary that provides an overview that explains the type of work and daily tasks performed by a particular position.
Job in Demand	Indicates the job titles that are currently has or is projected to have a number of positions in an industry and important in the smooth running of the main operations of the particular sector.
Job Title	Defined as the name of a particular job in an organisation.
Labour Demand	The labour required by establishments to produce goods and services at a given point in time.
Low Skilled	Defined as a person who performs simple, routine and unsystematic tasks that typically require the use of hand tools or with physical energy whether light or heavy.
Malaysian Occupational Skills Qualification Framework	Describes and breakdowns an occupational skill into eight competency levels.

Occupation	Defined as a set of jobs whose main tasks and obligations are characterised by a high degree of similarity.
Occupational Framework	Document serves as the foundation for creating occupational standards, particularly in the Employment Activities sector.
Occupational Analysis	Process considers industry requirements as well as studies of relevant occupational structures.
Skills	Defined as the ability to carry out the tasks and duties of a given job.
Skilled	Defined as a person who has acquired the full knowledge and qualifications necessary to carry out a job or skill in carrying out a major task.
Semi-Skilled	Defined as a person who has been appointed to carry out a limited number of functions or operations but has not yet acquired the comprehensive skills and knowledge required for a particular field of craft or occupation.
Vacancies	Unfilled jobs which are ready to be filled. Employers are actively seeking candidates including advertising vacancies, issuing notices and registering with employment agencies as well as conducting interviews to select candidates to fill in the vacancies.

CHAPTER I

INTRODUCTION

1.1 Introduction

The manufacturing of leather and related products in general is a dynamic and multifaceted industry that contributes to Malaysia's economy. From traditional leather crafting to cutting-edge manufacturing processes, this industry is vital to many industries, including fashion, automotive, footwear, upholstery, and luxury goods. As the demand for high-quality leather goods grows, so does the demand for skilled and knowledgeable professionals to sustain and innovate in the industry. This study will conduct a thorough examination of the Occupational Framework (OF) in the manufacture of leather and related products, with the goal of identifying the diverse range of job roles, skills, and expertise required to thrive in this ever-changing domain. The Manufacture of Leather and Related Products OF study begins with this chapter, which provides an overview of the context's history, the problem statement, the objective of the study, its scope, its importance, and the chronological order of the chapters.

1.2 Research Background

Leather and related product manufacturing has a long history that dates back thousands of years. The raw material used in the leather industry is commonly derived from the livestock or animal farming industry such as cow, goat, sheep and pig, then being put through several processes including tanning and finishing. Today, leather is still used to produce a wide range of high-end products such as leather footwear, leather handbags, leather garments, and so on. Leather has always been a highly valued material due to its durability, flexibility, and aesthetic appeal. Initially, leather production was centred on traditional craftsmanship, but technological advancements have caused the industry to evolve in order to meet the demands of global markets. Today, the leather industry is an important contributor to the global economy, with its products used in a variety of industries. Leather is heavily used in the fashion industry, particularly for luxury goods, apparel, and accessories. Leather is also used in the automotive industry for car interiors, and the furniture and upholstery industries for its durability and luxurious feel. Despite its importance, the leather

industry has faced challenges over the years, including environmental concerns, ethical raw material sourcing, and the introduction of synthetic alternatives. As a result, there is a growing emphasis in the industry on sustainability, responsible sourcing, and eco-friendly practices.

Malaysia's leather and related products is part of the sub-sector under manufacturing industry that consists of textiles, wearing apparel, leather products and footwear. In terms of the capacity utilisation rate as reported in the first quarter of 2023 in the Manufacturing Industry Capacity Utilisation Statistics, this sub-sector has registered a drop from 80.9% in Q1, 2022, 79.3% in Q4, 2022 to 74.5% in Q1, 2023. It is reported that the downturn was primarily due to the movement control order following the Coronavirus-19 (COVID-19) pandemic that hit the country in early 2020.

According to a report published by 6Wresearch on Malaysia Leather Good Market (2020-2026), Malaysia has reportedly relied more on imports to meet its growing demand in the leather product market. Manufacturers of leather goods purchase imported processed leather primarily from Indonesia, India, China, Thailand and South Korea. Cowhide, goat leather, buffalo leather, camel leather, and calfskin leather are the most common forms of leather utilised. Because each animal skin has its own distinct features, producers will select hides/skins depending on their strength, durability, softness, price, and stretch ability. According to the Malaysian Footwear Manufacturers Association (MFMA), currently, it is difficult to find leather tanneries operating in the country as many manufacturers prefer to buy processed leather than involved in processing raw hide into finished leather. Besides being relatively cheap, processed leather comes in a variety of sizes, shapes, thickness and colours that is just ready to make leather products. It is also worth noting that the number of manufacturers is also shrinking as they shift their focus from manufacturing to trading or retailing. This is not only in the case of leather products but also the other related products including handbags, luggage and footwear. In other words, instead of building their own factory, they opt to buy ready-made goods especially from overseas or have them manufactured through Original Equipment Manufacturer (OEM). Except for manufacturers or producers of bespoke products who have their own client, they still produce their own products.

Nevertheless, the strategic location of Malaysia, as well as its well-developed infrastructure, have facilitated trade and export opportunities for leather and leather products. The country has long played an important role in the global supply chain for finished leather products such as

footwear, bags, and other accessories. Malaysian Investment Development Authority (MIDA) monitors and supports the manufacturing of leather and related products such as handbags and footwear under the category of "lifestyle" alongside textile and apparels. This sector is also strongly supported by appropriate associations, which assist industry participants in marketing their products both locally and internationally.

Additionally, creating an occupational framework for the Malaysian leather and related products industry is also deemed critical for a number of pertinent factors which will be discussed in the following section. A well-developed occupational framework offers a systematic approach to human resource development, training, and workforce management, which subsequently enhances the industry's overall growth and competitiveness. The development of OF for C15 is divided into 2 (two) specific areas, i.e.: Group 151 which includes tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness; dressing and dyeing of fur. This group also includes:

- a. Manufacture of luggage, handbags and the like of leather, composition leather or any other materials where the same technology is used as for leather
- b. Manufacture of non-metallic watch straps (e.g., fabric, leather, plastic, etc.)
- c. Manufacture of diverse articles of leather or composition leather (e.g., driving belts, packing, etc.)
- d. Manufacture of plastic luggage
- e. Manufacture of saddlery and harness
- f. Manufacture of whips and riding crops

Figure 1 summarises the detail areas of C151

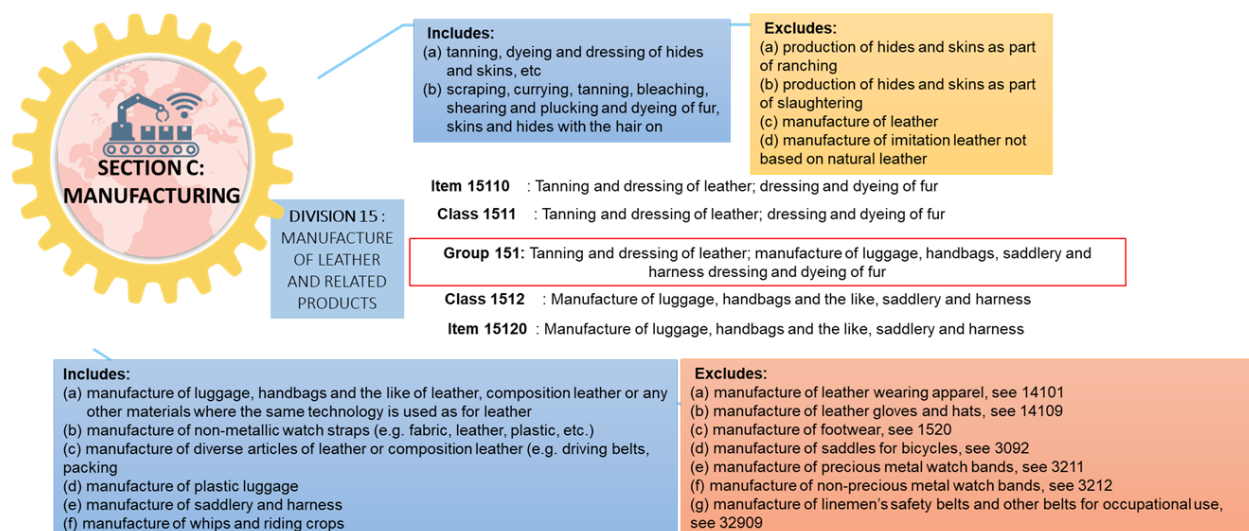


Figure 1: Areas of C151

Group 152 on the other hand covers the manufacture of footwear which includes manufacture of footwear for all purposes, of any materials including moulding and manufacture of gaiters, leggings and similar articles. The manufacture of leather parts of footwear (e.g., uppers and parts of upper, outer and inner soles, heels, etc.), manufacture of boots or shoes containing fur parts and manufacture of wooden footwear are also included in this group. However, the manufacture of footwear parts which are not made of leather, the manufacture of ski-boots and the manufacture of footwear of textile material without applied soles is not included in this particular section. Figure 2 summarises the detail areas of C152.

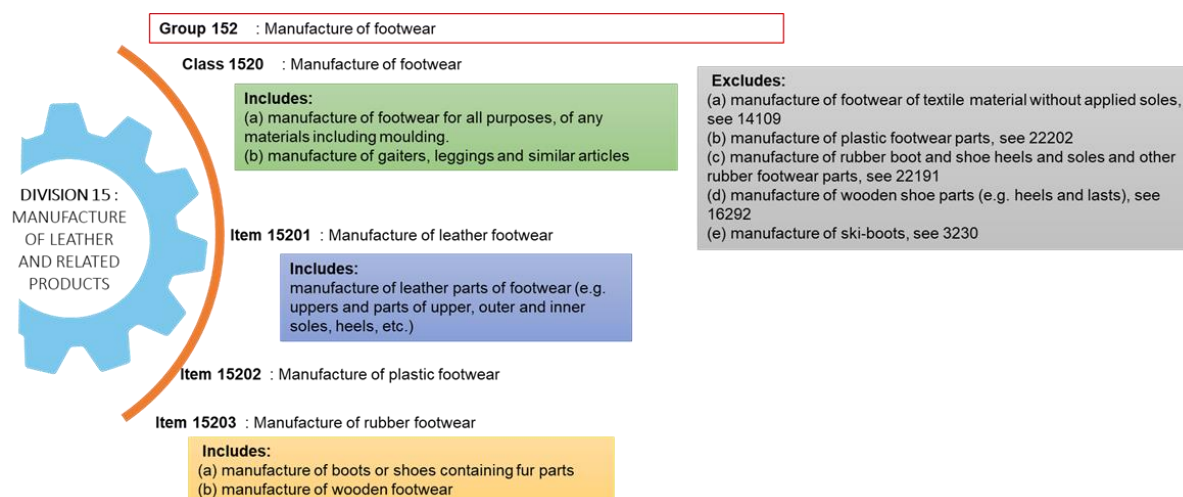


Figure 2: Areas of C152

1.3 Problem Statement

Over the years, the manufacturing industry is gaining its traction especially post Covid-19 pandemic. According to the Manufacturing Statistics Malaysia, May 2023 published by DOSM, the Manufacture of Leather and Related Products in average made 19% year-on-year growth under the Domestic oriented industries category. Although the sector is making positive progress especially in footwear and handbag manufacturing, according to MFMA, the number of local manufacturers decreased tremendously. They either cease operation or venture into other sectors such as retailing instead of manufacturing. This is not productive for the sector because they will lose those skilled employees due to the shift in occupation. Additionally, the sector is facing difficulty in recruiting and retaining especially the lower-level workers mainly because of the nature of the work, working environment, low salary and career growth.

Therefore, the needs of a distinct framework that clarifies work activities and competency expectations while also serving as a career path to attract talent for the industry. Furthermore, the current labour demand and supply trend, which necessitates the identification of critical jobs, necessary competencies, and jobs related to the industrial revolution and technological advancements, may have an impact on the occupational landscape of the industry. As a result, more research into the entire Occupational Structure of Manufacture of Leather and Related Products and career options in the form of Occupational Framework (OF) is required. An OF is a detailed document on a specific Occupational Structure (OS) that outlines tier-based job sectors and job titles within an industry in Malaysia. It is not only depicting the job titles, but it also describes the occupational responsibilities and the skill set required in the specific industry.

On the other hand, due to the variety of the tasks, each job requires a distinct set of skills. It would be difficult to manage and determine what is required to do the job. As a result, the OF defines a job title's work scope within an occupation area in terms of the competencies required and in-demand within the sector. In contrast, the competencies identified in OF do not specify the level of competencies. It will be examined in the National Occupational Skills Standards (NOSS), a document developed after the OF that focuses on specific labour abilities. Due to that, developing this OF is of paramount importance since it serves as the main point of reference for enhancing existing NOSS and developing new NOSS. This highlights the importance of conducting research into the sector of the Manufacture of Leather and Related Products OF.

The primary advantage of developing this OF is that it will result in the development of a more apparent occupational route for the affected employees. As things currently stand, there is no standard or documented guide outlining the nature of the job, potential career advancement, and competency requirements to perform the job in this particular sector. Depending on their individual organisation and business requirements, certain companies may have different career paths for their employees. As a result of a thoroughly documented occupational framework, those in the industry may refer to this document in developing their own organisational chart and defining their own professional development.

1.4 Objective of Study

The objectives of the study are as below:

- a) To identify the relevancy of previous research with the current and future needs of the industry;
- b) To identify job areas, job titles and relevant competency level to establish Occupational Structure (OS) for the manufacture of leather and related products sector;
- c) To determine Occupational Responsibilities (OR) that outline the main work activities and tasks for each job titles;
- d) To identify critical jobs titles and establish the Occupational Descriptions (OD) for each critical job title for the manufacture of leather and related products sector;
- e) To analyse the competency in demand, jobs relevant to the latest industry development, as well as emerging skills.

The study must achieve the aforementioned goals in order to retain its applicability and value. Multiple data gathering technique were employed, which involved document review, face to face interview, focus group discussion, and industry benchmarking visit to assure objectivity and reliability. The industry expert panel, which is made up of members from various industry players and pertinent agencies, provides most of the input.

1.5 Scope of Study

According to the MSIC 2008 document's economic activities, specifically the Manufacture of Leather and Related Products sector under Division C15, the scope of the study refers to the

identification of occupational areas, job titles, competencies levels for each job title, critical jobs, occupational responsibilities, and occupational descriptions. This research considers the nation's existing technological and industrial revolutions in order to determine newly developing talents that will be formed by the country's industrial revolution's future course. The scope of this study will adhere to the parameters established in MSIC 2008.

1.6 Significance of Study

The development of an OF for this sector, specifically for the C15 division, in response to the growing demand and expanding job market for the Manufacture of Leather and Related Products sector in Malaysia, provides a broad framework of the occupational scope and important job areas and job titles within this sector. The framework encapsulates the collective wisdom of a representative group of industry players serving as subject matter experts on the key job functions and competencies required to be successful in a specific occupation. The OF should be viewed as a guide for organisations, particularly the concerned manufacturing sector, in developing organisational charts, developing individual job descriptions, and charting employees' career paths. Organisations can either adopt the frameworks or modify them to fit their specific needs. In this line of thought, the OF would provide insight to job seekers in terms of career options. Here are some main reasons why this framework is significant:

- a) *Standardisation of Skills and Competencies*: A job role's specific skills, attitude, and knowledge are defined by an occupational framework. By standardising these specifications, it becomes easier to assess and match workforce skills to the requirements of different professions. This guarantees that appropriate talents are hired for the right jobs, resulting in improved efficiency and productivity.
- b) *Quality Enhancement*: A clearly established occupational framework promotes the growth of specialised skills and craftsmanship. The quality of leather and related products improves as workers are trained according to standardised guidelines, making them more appealing to both domestic and international markets. Product quality may contribute to better interest and satisfaction among consumers.
- c) *Workforce Adaptability and Flexibility*: With technological advancements and shifting consumer demands, industries are constantly evolving. An occupational framework enables the workforce to effectively adapt to these changes. Workers can receive training

to learn new skills and stay current on industry practices, ensuring the industry's competitiveness in the global market.

- d) *Career Progression and Employee Morale*: Employees are motivated to perform better and invest in their personal and professional growth when they have a clear career advancement route within the sector. Workers are more likely to stay committed to their positions when they see possibilities for promotion and skill development, which reduces turnover rates and boosts employee morale.
- e) *Support for Industry Growth and Innovation*: An occupational framework makes it easier to identify talent gaps in the sector. Recognising these shortages enables governments, training institutions, and industry partners to create tailored staff development initiatives and efforts to fill them. This, in turn, encourages innovation and keeps the sector competitive in the worldwide market.
- f) *Recognition of Skills and Certifications*: A well-structured occupational framework serves as the foundation for official certificates and credentials for industry personnel. This talent recognition not only benefits individual workers by increasing their employability, but it also gives customers and companies confidence when they see recognised specialists working in the production process.
- g) *Industry Collaboration and Partnerships*: Establishing an occupational framework usually requires collaboration among industry experts, educational institutions, and government bodies. Such collaborations may result in a greater knowledge of the sector's needs, enhanced training initiatives, and the development of a talent pool that will contribute to the continued growth of Malaysia's leather and related products industry.

On top of all the above, this OF will also serve as a reference in the development of the National Occupational Skills Standard (NOSS) and will enrich the Malaysia Standard Classification of Occupations (MASCO 2020).

1.7 Structure of Chapters

This chapter concludes with a brief overview of the overall study which includes:

a) Chapter I: Introduction

Presents the research background, problem statement, research goals, research scope, importance of the investigation, and a summary of the key components within this OF in order to justify the study.

b) Chapter II: Literature Review

Showcases the ecology of the *Sistem Persijilan Kemahiran Malaysia* (SPKM) before describing the MSIC 2008 and Malaysian Occupational Skills Qualification Framework (MOSQF), its components, and the significance of the framework. Following a discussion of the current state of the market and industry, a comparison of the sector with a few other nations is made. There is a quick introduction to the components of technology and the industrial revolution. Additionally, it looks at the current stakeholders, such as governing authorities, industry associations, business entities and professional bodies that are related to the particular manufacturing industry.

c) Chapter III: Methodology

Explains the research approach and design deployed for gathering and analysing data towards achieving the objectives of the study.

d) Chapter IV: Findings

Analyses the findings of the research methods used in Chapter 3 that are in line with the Chapter 1 study goals.

e) Chapter V: Discussion, Recommendations and Conclusion

Concludes the overall research findings and provides recommendations that include the input from the industry experts. The chapter hence wraps up the study on the Occupational Framework for the Manufacture of Leather and Related Products sector.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

The manufacturing sector is critical to Malaysia's economic development, and the leather and related products industry contributes to this thriving environment. As the sector evolves and responds to local and international market demands, the necessity for a strong and dynamic occupational framework becomes essential. The second chapter is a thorough literature study that digs into the many aspects of building an occupational framework customised particularly for the manufacturing of leather and related products industry in Malaysia. This chapter examines the current state of the manufacturing sector, in particular the manufacture of leather and related products, along with other crucial issues that should be addressed in this narrative. The National Skills Development Act of 2006 (Act 652), which mandates the formation of the *Sistem Persijilan Kemahiran Malaysia* (SPKM), an ecosystem of which the Occupational Framework (OF) is a component, will be briefly introduced to kick off the discussion. The history of OF, its elements, and its significance will next be covered in more detail. The context for the scope of this OF is established by the MSIC 2008, which will be presented after.

2.2 National Skills Development Act 2006 (Act 652)

The National Skills Development Act (Act 652) was formally gazetted on June 29, 2006, and it serves as a legislation that encourages the growth and enhancement of a person's talents necessary for a profession through skill training, as well as making provisions for related issues. Or to put it in another way, the Act serves as a national piece of legislation that sets the direction, develops, and puts into practice Malaysia's standards for the advancement of skills and training. Alternatively, this Act performs as a catalyst for the implementation of SPKM, where the Department of Skills Development (DSD) is the only organisation empowered to initiate, manage, and oversee all processes and procedures established under SPKM.

The SPKM ecosystem comprises six essential processes aimed at enhancing the development of skilled labour in Malaysia. These processes collectively work towards achieving a common

goal. The system is designed to align with industry demands for specific skills and involves the creation of four public documents; 1. Occupational Framework (OF), 2. National Occupational Skills Standard (NOSS), 3. Written Instruction Materials (WIM) 4. Questions and Assessments. The subsequent process will be implementing it at the institutes and training programs to fulfil the needs for the development of the related industry. These documents serve as crucial components of the SPKM, contributing to the objectives outlined in Act 652 at the national level. OF development is of particular significance across various industries, with a specific emphasis on its relevance to the manufacturing of leather and related products industry. The overall cycle of the SPKM encompasses these six processes, with the ultimate aim of meeting industry requirements through skill development, training implementation, and continuous industry needs assessment. Please refer to Figure 2.1 for a visual representation of the complete SPKM cycle.

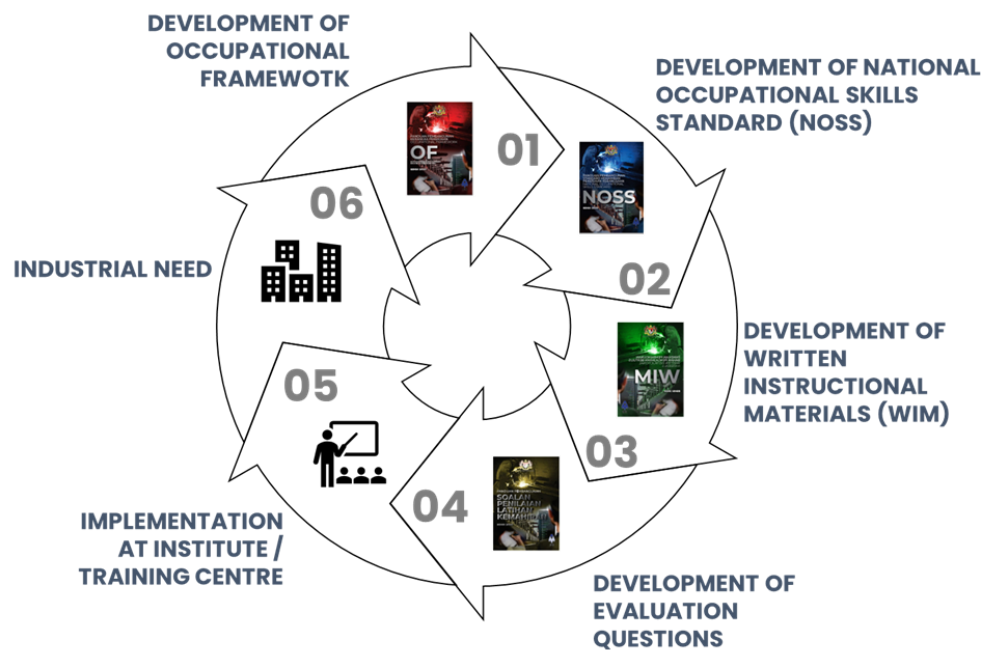


Figure 3: Sistem Persijilan Kemahiran Malaysia (SPKM)

2.3 Occupational Framework

The Occupational Framework (OF) is a document that outlines the occupational structure within a specific sector in Malaysia. It provides a comprehensive list of potential job titles within each occupational area as well as the broader occupational categories. This document was first introduced in 2016 and encompasses a wide range of industries, catering to the needs of small,

medium, and large businesses. Before its introduction in 2016, the document was referred to as Occupational Analysis (OA) and was based on the Third Industrial Master Plan for Malaysia, which spanned from 2005 to 2016 (IMP3). The OA process involved studying relevant occupational structures and industry demands. However, there was a need for a more detailed and specified document, which was influenced by changes in industrial code entities by the Department of Statistics (DOSM).

2.3.1 Elements of Occupational Framework

The Occupational Framework (OF) consists of three key elements: Occupational Structure (OS), Occupational Responsibilities (OR), and Occupational Descriptions (OD). These components serve to provide a comprehensive understanding of various professions.

- a) *Occupational Structure (OS)*: This component deals with how jobs are distributed within an organisation, categorised by skill level, economic purpose, or social significance. It offers insights into career paths within specific professions and occupational sectors.
- b) *Occupational Responsibilities (OR)*: OR provides a well-structured and accurate depiction of job roles and their associated duties.
- c) *Occupational Descriptions (OD)*: OD offers a summary of the primary responsibilities associated with a job, outlining both the general and specific competencies required.

In conclusion, the OF plays a crucial role in meeting Malaysia's labour market requirements by offering a broad perspective on the scope of work within various occupational sectors.

2.3.2 The Importance of Occupational Framework

Industry stakeholders may rely on a well thought-out, exact, and accurate Occupational Framework (OF) as a dependable source of information to help them plan career trajectories inside their organisations. OF development takes into account the following elements in addition to the essential ones like Occupational Structure (OS), Occupational Responsibilities (OR), and Occupational Descriptions (OD):

- a) *Jobs in Demand*: These are job titles that currently has or is projected to have a number of positions in an industry and important for the main operation of the relevant industry.

- b) *Critical Jobs*: Critical jobs are those that are highly sought after within their respective industries but are challenging to fill due to factors such as a limited supply of skilled workers, the need for specific skill levels or experience dependent. This scarcity can be attributed to various factors, including legislative requirements, international trade, the introduction of new procedures, and advancing technology.
- c) *Competency in Demand*: This refers to the required ability to perform tasks effectively according to industry standards. It encompasses not only technical skills but also behavioural traits such as attitude and knowledge that are essential for success in the industry or company.
- d) *Jobs Related to the Latest Technology Development*: These are positions linked to the ongoing industrial revolution and the rapid pace of technological advancement. They are critical for keeping pace with industry advancements.
- e) *Emerging Skills*: Emerging skills are those expected to become pivotal for the sector in the near future, often due to recent developments, trends, or research. These skills are typically associated with the industrial revolution and the accelerated technological advancements.

Various documents and procedures are often used to create the OF successfully. The Department of Statistics Malaysia (DOSM) issued the Malaysian Standard Industrial Classification (MSIC) 2008, which serves as the basis for classifying the OF. This categorisation tries to bring the industry sector into compliance with national and international norms. When creating the National Occupational Skills Standard (NOSS) for pertinent industries, the publicly accessible OF report serves as a reference. The next section of the article highlights the MSIC 2008 and associated data in relation to the Manufacture of Leather and associated Products industry. This emphasizes how crucial it is to match business practices with accepted norms and standards.

2.4 Malaysian Standard Industrial Classification (MSIC)

A thorough taxonomy that classifies all economic activities in Malaysia is the Malaysian Standard Industrial Classification (MSIC) 2008. The International Standard Industrial Classification of All Economic Activities (ISIC) Revision 4 served as the basis for this classification system's adaptation, which included any required modifications to bring it into compliance with the national norms and specifications described in this document. The MSIC 2008 is an upgraded version that

adheres to the criteria established by the United Nations Statistics Division, in contrast to the earlier MSIC 2000, which used ISIC Revision 3. The creation of a category-based structured list of economic activity is the MSIC's main goal. For the purpose of creating statistical reports on various economic operations, this classification method is important. To create industries, units with similar primary activities are grouped together based on predetermined similarity criteria. This approach helps in organising economic data and understanding the landscape of economic activities in Malaysia effectively.

2.4.1 MSIC Overview

The MSIC 2008 is divided into tiers that reflect each individual sector. The categories mentioned are shown in Table 2.1 below.

Table 2.1: Categories Based in MSIC 2008

Category	Code
Section	A
Division	01
Group	011
Class	0111
Item	01111

In Malaysia's MSIC 2008 categorisation system, the structure is organised hierarchically, with each level identified by specific codes and labels:

- a) Section: This is the highest level of categorisation and is represented by a single alphabetical letter. It broadly designates an industry or economic sector.
- b) Division: Below the Section level, a "Division" is identified by a two-digit code. A Section may contain multiple Divisions, providing further refinement of economic activities.
- c) Group: Within a division, there are "Groups" distinguished by a three-digit number. These Groups offer more specific groupings of economic activities.

- d) **Class:** Going deeper into the hierarchy, a "Class" is represented by a four-digit code. It provides a more detailed breakdown of economic activities within a Group.
- e) **Item:** The finest level of categorisation is the "Item," which is identified by a five-digit code. It offers the most granular and specific classification of economic activities.

This hierarchical structure allows for a systematic and detailed categorisation of economic activities based on the MSIC 2008 in Malaysia, as outlined in Table 2.2. It provides a standardised way to organise and analyse economic data across various industries and sectors.

Table 2.2: Summary Framework of MSIC 2008 in Malaysia

Category	Total
Section	21
Division	88
Group	238
Class	423
Item	1174

2.4.2 Scope of Occupational Framework Based on MSIC 2008 – Manufacture of Leather and Related Products

The scope of the Manufacture of Leather and Related Products is categorised under Section C and division 15 according to the MSIC 2008 classification. This sector involves two (2) major groups of activities i.e. 151 and 152 and each of these groups can be further subdivided into a total of three (3) classes i.e. 1511, 1512 and 1520. From there, another 5 items were derived, i.e. 15110, 15120, 15201, 15202 and 15203. Table 2.3 below presents the summary of scope based on the hierarchy of section, division, and groups.

Table 2.3: Summary of Scope Based on MSIC Section, Division and Group

Category	Code	Description
Section	C	Manufacturing
Division	15	Manufacture of Leather and Related Products
Group	151	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness dressing and dyeing of fur
	152	Manufacture of footwear
Class	1511	Tanning and dressing of leather; dressing and dyeing of fur
	1512	Manufacture of luggage, handbags and the like, saddlery and harness
	1520	Manufacture of footwear
Items	15110	Tanning and dressing of leather; dressing and dyeing of fur
	15120	Manufacture of luggage, handbags and the like, saddlery and harness
	15201	Manufacture of leather footwear
	15202	Manufacture of plastic footwear
	15203	Manufacture of rubber footwear

Source: MSIC 2008

Meanwhile, the following Table 2.4 describes the scope further based on the respective items detail inclusion and exclusion according to MSIC 2008.

Table 2.4: Detail Description of Item on MSIC 2008

Category	Code	Description
Item	15110	Tanning and dressing of leather; dressing and dyeing of fur Includes: i. Tanning, dyeing and dressing of hides and skins, etc. ii. Scraping, currying, tanning, bleaching, shearing and plucking and dyeing of fur, skins and hides with the hair on Excludes: i. production of hides and skins as part of ranching ii. production of hides and skins as part of slaughtering iii. manufacture of leather apparel iv. manufacture of imitation leather not based on natural leather
	15120	Manufacture of luggage, handbags and the like, saddlery and harness Includes: i. manufacture of luggage, handbags and the like of leather, composition leather or any other materials where the same technology is used as for leather ii. manufacture of non-metallic watch straps (e.g., fabric, leather, plastic, etc.) iii. manufacture of diverse articles of leather or composition leather (e.g., driving belts, packing) iv. manufacture of plastic luggage v. manufacture of saddlery and harness vi. manufacture of whips and riding crops Excludes: i. manufacture of leather wearing apparel, see 14101

		ii.manufacture of leather gloves and hats, see 14109 iii.manufacture of footwear, see 1520 iv.manufacture of saddles for bicycles, see 3092 v.manufacture of precious metal watch bands, see 3211 vi.manufacture of non-precious metal watch bands, see 3212 vii.manufacture of linemen's safety belts and other belts for occupational use, see 32909
	15201	Manufacture of leather footwear Includes: i.manufacture of leather parts of footwear (e.g., uppers and parts of upper, outer and inner soles, heels, etc.) Excludes: i.manufacture of footwear of textile material without applied soles, see 14109 ii.manufacture of plastic footwear parts, see 22202 iii.manufacture of rubber boot and shoe heels and soles and other rubber footwear parts, see 22191 iv.manufacture of wooden shoe parts (e.g., heels and lasts), see 16292 v.manufacture of ski-boots, see 3230
	15202	Manufacture of plastic footwear Includes: i.manufacture of footwear for all purposes, of any materials including moulding. ii.manufacture of gaiters, leggings and similar articles
	15203	Manufacture of rubber footwear

		Includes: i.manufacture of boots or shoes containing fur parts ii.manufacture of wooden footwear
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Source: MSIC 2008

2.5 Malaysia Occupational Skills Qualification Framework (MOSQF)

As shown in Table 2.5, the MOSQF segmentised an occupational skill into eight (8) competency levels. Each of these levels corresponds to a certain amount of complexity, knowledge, and independence needed to demonstrate competency. These levels are established according to the knowledge, practical experience, and ability required to use the talent at that specific level.

Table 2.5: Malaysian Occupational Skills Qualification Framework (MOSQF) Chart

Level	Level Descriptors
8	Achievement at this level reflects the ability to develop original understanding and extend a sub-area of knowledge or professional practice. It reflects the ability to address problematic situations that involve many complexes, interacting factors through initiating, designing and undertaking research, development or strategic activities. It involves the exercise of broad autonomy, judgement and leadership in sharing responsibility for the development of a field of work or knowledge, or for creating substantial professional or organisational change. It also reflects a critical understanding of relevant theoretical and methodological perspectives and how they affect the field of knowledge or work.
7	Achievement at this level reflects the ability to reformulate and use relevant understanding, methodologies and approaches to address problematic situations that involve many interacting factors. It includes taking responsibility for planning and developing courses of action that initiate or underpin substantial change or development, as well as exercising broad autonomy and judgement. It also reflects an

	understanding of theoretical and relevant methodological perspectives, and how they affect their sub-area of study or work.
6	Achievement at this level reflects the ability to refine and use relevant understanding, methods and skills to address complex problems that have limited definition. It includes taking responsibility for planning and developing courses of action that are able to underpin substantial change or development, as well as exercising broad autonomy and judgement. It also reflects an understanding of different perspectives, approaches or schools of thought and the theories that underpin them.
5	Achievement at this level reflects the ability to identify and use relevant understanding, methods and skills to address broadly-defined, complex problems. It includes taking responsibility for planning and developing courses of action as well as exercising autonomy and judgement within broad parameters. It also reflects the understanding of different perspectives, approaches or schools of thought and the reasoning behind them.
4	Achievement at this level reflects the ability to identify and use relevant understanding, methods and skills to address problems that are well defined but complex and non-routine. It includes taking responsibility for overall courses of action as well as exercising autonomy and judgement within fairly broad parameters. It also reflects the understanding of different perspectives or approaches within a sub-area of study or work.
3	Achievement at this level reflects the ability to identify and use relevant understanding, methods and skills to complete tasks and address problems that are well defined with a measure of complexity. It includes taking responsibility for initiating and completing tasks and procedures as well as exercising autonomy and judgments within limited parameters. It also reflects awareness of different perspectives or approaches within a sub-area of study or work.
2	Achievement at this level reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.

1	Achievement at this level reflects the ability to use relevant knowledge, skills and procedures to complete routine and predictable tasks that include responsibility for completing tasks and procedures subject to direction or guidance.
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2.6 National Occupational Skills Standard (NOSS)

The National Occupational Skills Standard (NOSS) is a document that outlines both the abilities required of an employee working in Malaysia at a certain level of employment and the process for learning those competencies. Part IV of the National Skills Development Act 652, contains gazettes describing NOSS. A team of professionals and practitioners from the industry developed NOSS to satisfy market demands. It serves as the main resource while implementing the SPKM. As a result, the effectiveness of industry employees and apprentices will be evaluated in accordance with NOSS prior to the awarding of SPKM and NOSS Relevant to MSIC 2008 Section C, Division 15.

Currently, there are six (6) NOSS developed by the Department of Skills Development (DSD) that are associated with the MSIC 2008 Section C, Division 15: Manufacturing of Leather and related products.

Table 2.6: NOSS Relevant to MISC 2008 Section C, Division 15: Manufacturing of Leather and Related Products)

(Source: Standard Registry version 8 May 2023, DSD)

DIVISION: C15 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	GROUP: C151 TANNING AND DRESSING OF LEATHER, MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS, DRESSING AND DYEING OF FUR
Area	Leather Goods Making-Bag
L4, L5	Not Available
L3	SS-300-3:2012 Leather Bag Making (18-12-2012)

L2	SS-300-2:2012 Leather Bag Making (18-12-2012)
L1	SS-300-1:2012 Leather Bag Making (18-12-2012)
DIVISION: C15 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	GROUP: C152 MANUFACTURE OF FOOTWEAR
<i>Area</i>	<i>Leather Goods Making-Footwear</i>
L4, L5	Not Available
L3	SS-301-3:2012 Leather Footwear Making (18-12-2012)
L2	SS-301-2:2012 Leather Footwear Making (18-12-2012)
L1	SS-301-1:2012 Leather Footwear Making (18-12-2012)

2.7 Industry Outlook

Manufacturing has been essential to emerging nations' efforts to advance and flourish. The Malaysian economy has gone through this since the 1960s. But the nation's economy has started to deindustrialise since the late 1990s. The relative fall in the sector's contribution to the national economy has also led to a decline in Malaysia's participation in the global economy, since most of Malaysia's manufacturing has been predominantly export-oriented. The expansion of the services sector is occurring along with these changes. Although the services industry has always been significant to the manufacturing sector, the emergence of global value chains (GVCs) and global

production networks (GPNs) is set to increase its significance. (Lee, Casey, 2019). The output contribution of the service sector to the manufacturing sector provides empirical evidence of this. Services make over 50% of all global trade in value. (Miroudot and Cadestin, 2017).

Over the past fifteen years, the industrialisation of the Malaysian economy has decreased. The fall in the manufacturing sector's contribution to GDP and overall employment is evidence of this. The manufacturing sector's real GDP share peaked at close to 31% in 1999, as measured in terms of GDP share (Figure 2.1). After that, it decreased practically constantly every year, and by 2016, the sector's GDP share had decreased to 22%. From 32% in 1974 to 53% in 2016, the services sector's proportion of the GDP has grown steadily. Although there were minor changes in the services sector's GDP share over some time, it quickly rose after 2004.

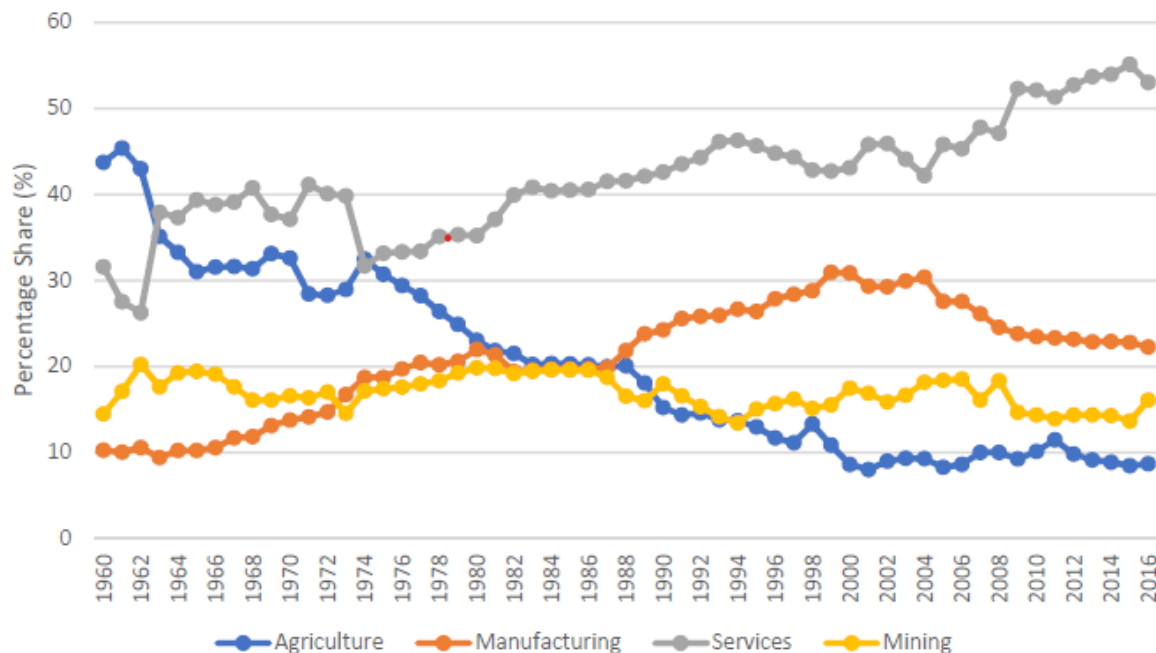


Figure 4: Structural Composition of Malaysia's GDP, 1960-2016 (Source: World Bank)

This, however, does not downplay the importance of the manufacturing industry as a whole especially in term of the contribution towards the nation's overall economy. According to the Department of Statistics report, the gross production of the manufacturing sector increased significantly in 2021, rising by 17.4% to RM1,609.3 billion from RM1,371.1 billion. The petroleum, chemical, rubber, and plastic goods sub-sector had the biggest contribution (31.6%, up

28.2% to RM508 billion). Products made from textiles, clothing, leather, and footwear however increased slightly with gross production by roughly 1.3%.

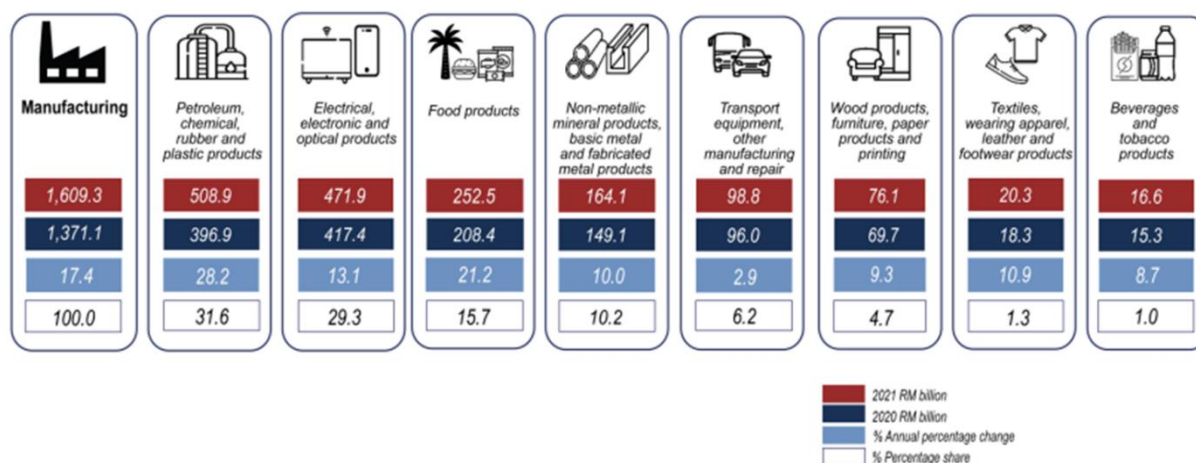


Figure 5: Gross Output by Sub-Sector, 2021 and 2021 (Source: AES 2022 Report, Department of Statistics, Malaysia)

However, the report above has clustered the manufacture of leather and related products sector with other similar sectors like textiles and wearing apparel although they are categorised under different MSIC codes. Based on researcher preliminary interviews with the industry players and stakeholders, this particular sector was greatly affected by the Covid-19 pandemic. According to the information gathered, only a few companies that are involved in category item 15110 in Malaysia and operating in a small scale. Most of the raw materials (hides and skins) are imported from other countries, mainly Thailand and China, due to competitive pricing. To top it off, most of the parts and materials used in the process of 15201 are imported either from China, Bangladesh, South Korea or Vietnam. This is to ensure competitiveness in terms of production costs. Although the demand of the products from this particular sector is increasing, most of the players have opted to manufacture their product elsewhere where the production cost is more competitive as compared to Malaysia. For the Original Equipment Manufacturer (OEM) in Malaysia, they would purchase most of the contents of their end product from other parts manufacturers overseas and only see to their final assembly locally to restrain their production cost.

Below is the statistics of labour contribution within the manufacturing sector as reported in the Annual Economic Statistics 2022 published by the Department of Statistics, Malaysia.

Table 2.7: Principal Statistics of Leather and Footwear Products, 2015, 2017 and 2021

Sub-sector	Group Code	Year	Value of gross output (RM'000)	Value of intermediate input (RM'000)	Value added (RM'000)	Total number of persons engaged (RM'000)	Salaries & wages paid (RM'000)	Value of fixed assets (RM'000)
Tanning and dressing of leather, manufacture of luggage, handbags, saddlery and harness; dressing and dyeing of fur	151	2021	1,376,233	939,079	437,154	4,993	164,030	147,906
		2017	1,005,249	694,239	311,010	4,736	148,066	240,954
		2015	888,082	662,645	225,437	4495	111,892	157,670
Manufacture of footwear	152	2021	1,105,360	754,247	351,113	7,506	184,165	187,283
		2017	1,126,210	744,408	381,801	6,968	187,351	262,506
		2015	1,009,616	677,370	332,246	6,335	170,844	224,203

(Source: AES 2022 Report, Department of Statistics, Malaysia)

2.7.1 The Value Chain within Manufacturing Industry

The Manufacture of Leather and Related Products falls under the manufacturing industry where the value chain is quite similar with other sectors in the manufacturing industry. Nevertheless, the generic leather value chain as shown in (Figure 6) developed by Mudingwe (2019) can clearly describe the flow of the entire sector from upstream to downstream of the whole industry especially sector C151.

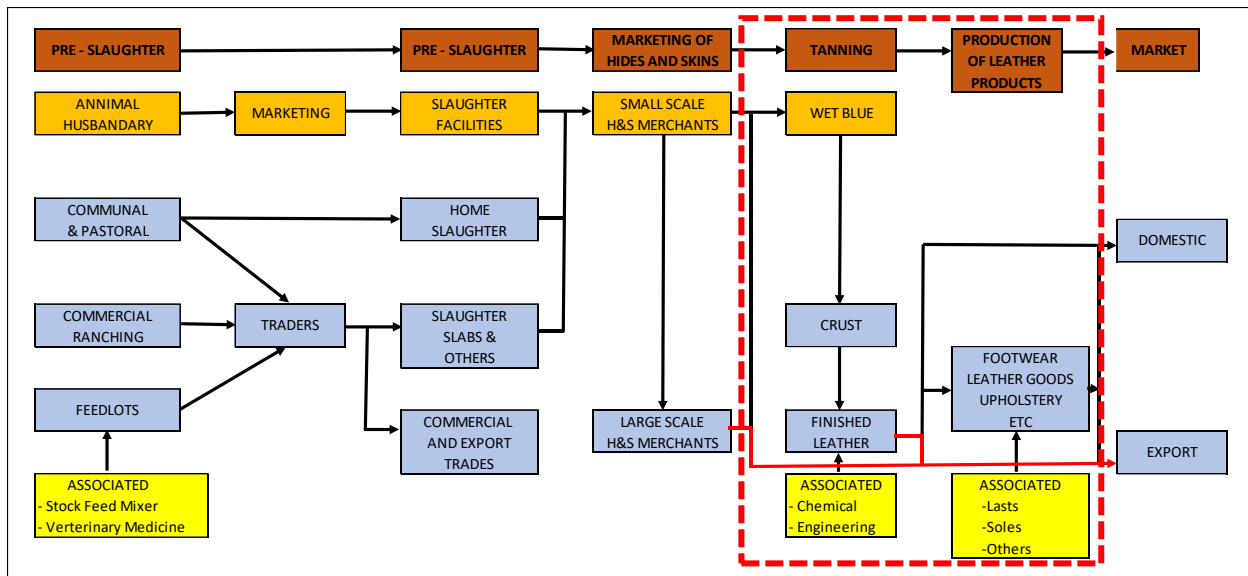


Figure 6: A Generic Leather Value Chain (Source: Mudingwe, 2019)

In general, sector C151 starts off with tanning, dyeing and dressing of hides/skins and skins of animals, mainly bovine. There are also other animal skins or hides/skins used in the industry depending on the demand for instance crocodile or snake skins. These types of skins are relatively more expensive due to the nature of the animals that were bred only for this specific need and not a by-product of other industries like food production. The skins will then go through the subsequent processes like the manufacture of luggage, handbags, footwears, saddlery and other diverse articles.

However, the value chain of sector C152 can clearly explain the value chain analysis for manufacturing firms as shown in (Figure 7). This value chain is adopted from Porter's Generic Value Chain where it clearly describes all relevant value chains involved in a manufacturing firm. Basically, the primary activities which involve inbound logistics, operations, outbound logistics, marketing and sales and after sales service are supported by the supporting activities or divisions such as procurement, technology development, human resource management and divisions such as account and finance and strategic management.

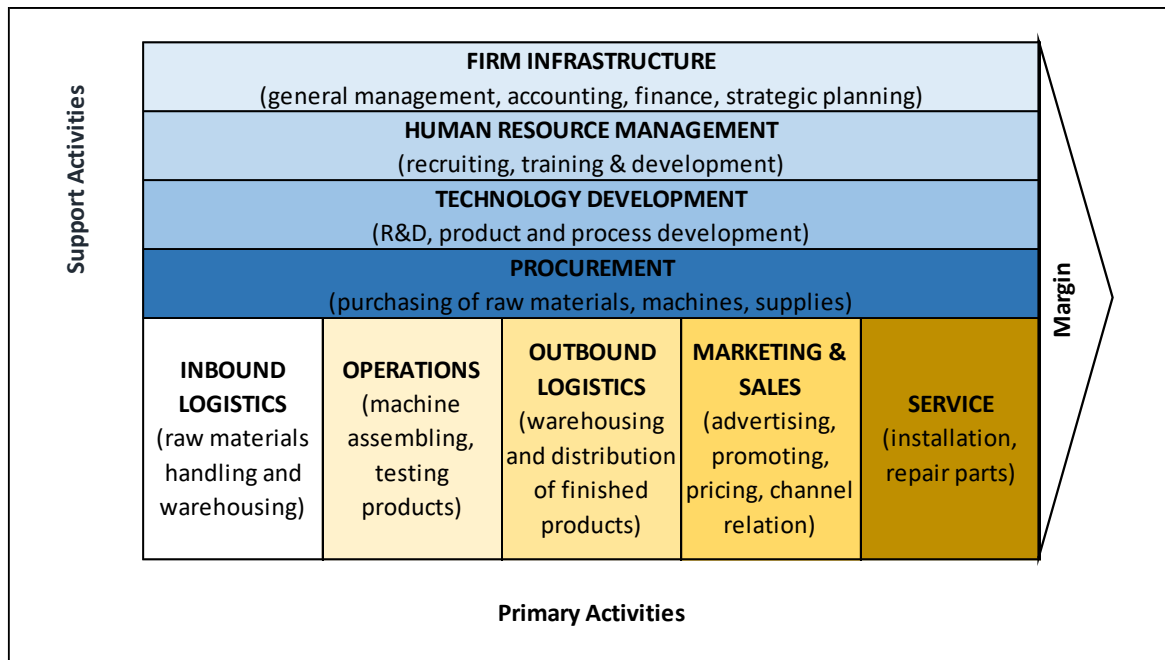


Figure 7: Value Chain Analysis for Manufacturing Firms

2.8 Relevancy of Technology Advancement with the Manufacture of Leather and Related Products industry

Recently, the Malaysian government unveiled its Fourth National Industrial Revolution Policy, which would go into force in 2021. The digital economy will advance thanks to the broad acceptance of the national industrial revolution's technology, with the aim of making Malaysia a high-tech nation by 2030. The disruptive change of industries brought on by the use of developing technologies is referred to as the present national industrial revolution. It is typified by cutting-edge technology that merges the physical, digital, and biological worlds, influencing all disciplines, industries, and the economy. The four categories of the nation's present industrial revolution strategy are for society, business, and government. The key objectives are as follows: first, provide people with knowledge and skill sets related to the current national industrial revolution; second, connect the country by creating a digital infrastructure; third, offer appropriate rules for adjusting to technological changes; and fourth, speed up innovation and adoption of current national industrial revolution technology.

The thrusts would be implemented based on the identification of 16 strategies, 32 national initiatives, and 60 sectorial initiatives by the government. Ten important economic sectors and six auxiliary industries will be the primary targets of the deployment of national industrial revolution technology (Source: National 4IR Policy, 2021). The primary pillars of the national industrial revolution have been defined as the nine technical pillars that can assist the deployment and optimisation of other technologies (Annex 1).

Based on various reports, particularly in the developed countries, the technology has changed the way or the process that products are created from concept to the final product. Part of this sector has begun its transition towards automation and Industry 4.0 through the use of various technologies as illustrated in Figure 8 below.



Figure 8: Technology Advancement Adopted in Developed Countries

2.9 Key Stakeholders

Any individual, team, organisation, or segment of society with a stake in the operations of the manufacturing sector is referred to as a stakeholder. These stakeholders have the power to affect the activities, goals, and policies of the sector, whether at the level of the entire industry or in the context of a broader economic landscape. Stakeholders in the employment sector of Malaysia include governmental organisations, regulatory bodies, business groups, trade associations,

professional organisations, and educational institutions engaged in training and development. Table 2.7 below puts forward information on the stakeholders related to Manufacturing industry.

Table 2.8: Key Stakeholders for Sector C15

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Prime Minister's Department of Malaysia	Transforming the public service delivery system by improving the governance quality, efficiency and competency to be more effective, responsive and integrity. Formulating the Government policies as well as coordinating Government decision implementations through various Ministries and agencies functions. Socio-Economic Development Planning Policy, Strategy and Program. Special Tasks at the highest level involving the national interest comprising the functions of different ministries as decided through main Government's meetings.
2.	Ministry of Investment, Trade and Industry (MITI)	- i.Develops and implements policies on industrial development, international trade and investment - ii.Attracts quality foreign and domestic investments - iii.Promotes and increases Malaysia's exports of high value-added goods and services by strengthening bilateral, regional and multilateral trade relations and cooperation - iv.Enhances national productivity and competitiveness, particularly in manufacturing and services sectors - v.Ensures a conducive business ecosystem to facilitate trade and investment - vi.Provides credible standardisation, accreditation and conformity assessment services to enhance societal and environmental well-being as well as facilitate trade and economic growth

		vii.Promotes and accelerates adoption of digitalisation and innovative technologies, including data-driven policies, towards growing globally competitive industries viii.Facilitates the development of small and medium enterprises, including homegrown industries, and the Bumiputera community to become globally competitive and integrate into the global value chain
3.	Ministry of Human Resources (MOHR)	The Ministry of Human Resources (MOHR) is a ministry under the Government of Malaysia which is responsible for skills development, labour, occupational safety and health, trade unions, industrial relations, industrial court, labour market information and analysis, social security. It carries the vision to become a leader in the human resources development and management of the country.
4.	Ministry of Entrepreneur Development and Cooperatives (MEDAC)	Assists the nation's entrepreneurial development strategy by establishing an ecosystem that is inclusive, sustainable, and knowledge-and-innovation-driven.
5.	Ministry of Domestic Trade & Cost of Living (KPDN)	KPDN formulates policies, strategies and reviews matters pertaining to the development of domestic trade. Some of the critical functions related to the ministry is to regulate matters pertaining to companies and businesses based on the related acts. Encourages good corporate governance practices; and develops and administers the intellectual property protection system.
	Ministry of Natural Resources,	Accountable for land, mining, minerals, geoscience, biodiversity, wildlife, national parks, forestry, energy,

	Environment and Climate Change (NRECC)	natural resources, environment, climate change, surveying, mapping, and geospatial data.
6.	Malaysian Investment Development Authority (MIDA)	MIDA is the government's principal investment promotion agency for the development of the manufacturing and services sectors in Malaysia. MIDA evaluates the following applications for projects in the manufacturing sector and selected services sub-sectors: i. Manufacturing licences ii. Tax incentives iii. Expatriate posts iv. Duty exemption on raw materials and components v. Duty exemption on machinery and equipment for the agricultural sector and any selected services sectors vi. Regional establishments
7.	Malaysia Productivity Corporation (MPC)	MPC works strategically with both the public and private sectors to forge productivity as the game-changing factor in increasing the nation's competitiveness and productivity in the direction of welfare and prosperity. At the national, sectoral and company levels, MPC promotes an overall increase in productivity and competitiveness.
8.	<i>Majlis Rekabentuk Malaysia</i> (MRM)	Spearheads design programmes in the country to boost the industry's design expertise, capabilities and standards. MRM is regarded as the think tank and advisor to develop a culture of innovative designs among Malaysian industries, and to ensure that Malaysia's standards are on par with the global standards.

9.	Intellectual Property Corporation of Malaysia (MyIPO)	MyIPO is responsible for the development and management of the intellectual property system in Malaysia. MyIPO administers and enforces Intellectual Property Legislation namely the Trademarks Act 2019, the Patents Act 1983, the Copyright Act 1987, the Industrial Designs Act 1996, the Layout Designs of Integrated Circuits Act 2000, Geographical Indications Act 2000 and subsidiary regulations.
10.	Standard and Industrial Research Institute of Malaysia (SIRIM)	SIRIM focused on creating new innovations and advancements in the manufacturing, technology, and services sectors and played a significant role in the growth of the nation's private sector by using the experience and knowledge base, provides the mechanism for research and technology development, as well as the national champion of quality.
11.	Halal Malaysia - <i>Jabatan Kemajuan Islam Malaysia</i> (JAKIM)	The function of Halal Malaysia is very much to facilitate and enforce halal standards among industry players especially when it involves manufacture of leather.
12.	Department of Occupational Safety and Health (DOSH)	Core activities of DOSH includes standard setting, enforcement and advisory services in the area of occupational safety and health in Malaysia
13.	Department of Veterinary Services	Provides regulations for the importation of hide and skin into Malaysia, endorse and issue veterinary health certificate, perform inspection at the farm, and conduct laboratory tests on sample of hides.

2.10 Government Legislations

Table 2.8 below depicts several main pieces of Malaysia legislation concerning the manufacturing industry especially in the Manufacture of Leather and Related Products sector.

Table 2.9: C15 Related Legislations

No	Legislations	Descriptions
1.	The Industrial Co-ordination Act 1975 (Act 156)	An Act to provide for the co-ordination and orderly development of manufacturing activities in Malaysia for the establishment of an Industrial Advisory Council and for other matters connected therewith or incidental thereto.
2.	Strategic Trade Act (STA) 2010 (Act 708)	An Act to provide for control over the export, trans-shipment, transit and brokering of strategic items including arms and related material and other activities that will or may facilitate the design, development and production of weapons of mass destruction and their delivery systems and to provide for other matters connected therewith consistent with Malaysia's national security and international obligations.
3.	Countervailing and Anti-Dumping Duties Act 1993 (Act 504)	An Act to make provisions for the investigation and determination of subsidies being provided on, and the dumping of, merchandise imported into Malaysia, the imposition of countervailing and anti-dumping duties to offset such subsidies or dumping, and other matters connected therewith.
4.	Industrial Co-ordination (Exemption) (Amendment) Order 1986	The Guidelines are in accordance with the Industrial Co-ordination (Exemption) (Amendment) Order 1986, whereby the Minister has exempted any manufacturer with shareholders' funds of less than RM2,500,000 and with less than 75 full-time paid employees from the requirement to apply for a manufacturing license.

5.	Occupational Safety and Health Act 1994 (OSHA) (Act 514)	An Act to make further provisions for securing the safety, health and welfare of persons at work, for protecting others against risks to safety or health in connection with the activities of persons at work to establish the National Council for Occupational Safety and Health, and for matters connected therewith.
6.	Factory and Machinery Act 1967 (FMA) (Act 139)	An Act to provide for the control of factories with respect to matters relating to the safety, health and welfare of person therein, the registration and inspection of machinery and for matters connected therewith
7.	Environmental Quality Act 1974 (Act 127)	An Act pertaining to the prevention, mitigation, control, and improvement of pollution and the environment, and for related purposes.
8.	Employment Act 1955 (Act 265)	The Employment Act of 1955 primarily governs Malaysia's labour laws. The Law regulates the terms and circumstances of employment, including the working hours, breaks, overtime pay, and other job conditions.
9.	Minimum Wages Order 2022	The Order raises the national minimum wage to RM1,500 starting on May 1, 2022, in accordance with section 23 of the National Wages Consultative Council Act 2011. Employers with less than five employees are exempted from the increase temporarily until December 31, 2022.

2.11 Industry Associations

a. *Federation of Malaysian Fashion Textile and Apparel (FMFTA)*

Facilitating the transformation into digitalisation and integration of the elements of technologies both in the front end as well as the back end of the Fashion, Textiles and Apparels Industry.

b. *Malaysian Footwear Manufacturers Association (MFMA)*

The Malaysian Footwear Manufacturers Association (MFMA) was established in 1978. It was primarily formed to look after the interests of the footwear and footwear-related manufacturers. Its membership includes manufacturers of footwear, components, accessories and other supporting industries. It also accommodates other members who are involved in the trading, distribution and sales of footwear through associate membership. It has 520 members as of 2022 where most of the members are companies located in Klang Valley, Perak and Johor.

c. *The Malaysian Textile and Apparel Centre (MATAC)*

Specialised Training Centre for the Textile and Apparel Industry. MATAC was established as a company limited by guarantee on 10 March 1994 with a launching grant from the Government of Malaysia (represented by the Ministry of International Trade and Industry). It is an organisation dedicated to continuously upgrade the productivity and competitiveness of the Textile and Apparel Industry in Malaysia.

d. *Malaysia International Chamber of Commerce and Industry (MICCI)*

MICCI is a Chamber which aims to facilitate and support members in their goals to successfully develop their business in Malaysia. MICCI engages with state and federal governments to continue to ensure the development and implementation of a robust regulatory framework, which is conducive to a healthy business environment.

e. *Malaysian Gifts & Premium Association (MGPA)*

Represents manufacturers, designers, suppliers of specialised services, wholesalers, importers, exporters, and merchants in the gifts and premiums sector. The MGPA is committed to the steady growth of the gifts and premiums sector through joint market research and industrial benchmarking projects.

f. Malaysian Rubber Products Manufacturers Association (MRPMA)

MRPMA is the industrial association for Malaysian rubber product producers. Its objectives are to foster collaboration among rubber product makers, safeguard their interests, advance their welfare and give the sector the tools necessary to develop, advocate, and implement policies and programs pertaining to technical, commercial, fiscal and industrial concerns. Additionally, the association organises internal and external sales and business missions, exhibits at international trade shows, and provides member firms with market research and information. Organise management and other industry-related seminars, collaborate with organisations in other nations, and take part in regional and worldwide conferences.

2.12 Conclusion

According to the results of the literature review, one of the key employability sectors in the Malaysian workforce is manufacturing, especially the manufacture of leather and related products. Various continuing efforts and initiatives, as well as the responsibilities performed by important stakeholders, have shown that the manufacturing sector will continue to be one of the drivers propelling Malaysia's economy despite the nation's present economic challenges. In light of the national fourth industrial revolution policy that will determine the future of the country, this Occupational Framework (OF) redefines the Occupational Structure (OS), Occupation Description (OD), competencies in-demand, and critical job titles within the sector. Chapter 3 will go through the implemented approach that will realise this OF's goals.

CHAPTER III

METHODOLOGY

3.1 Introduction

This chapter provides an overview of the study strategy and the methodology employed to accomplish the objectives of this Occupational Framework. To comprehend the recent development of the Manufacture of Leather and related products industry and to ensure the reliability of the outcomes, this study used a systematic research approach involving a sequence of actions and methods, ranging from document analysis, interviews, benchmarking visit and Focus Group Discussion (FGD) to the finalisation of the Occupational Framework document. The methodology is adopted to answer the following research objectives:

- a. To identify the relevancy of previous research with the current and future needs of the industry
- b. To establish the Occupational Structure (OS)
- c. To determine the Occupational Responsibilities (OR)
- d. To identify the critical jobs titles and establish the Occupation Description (OD)
- e. To analyse the competency in demand, jobs relevant to the latest technology, as well as emerging skills.

The deliverables would include, Occupational Structure (OS), Occupational Responsibilities (OR), Occupation Description (OD), Jobs in Demand, Critical Jobs, and Competency in Demand, jobs relevant to the latest technology as well as emerging skills.

3.2 Research Approach and Design

A research design is a framework that determines the way research is conducted including identifying type of data to be used, data collection technique, sampling strategy and analysis approach (Sekaran & Bougie, 2016). A research method is referred to the technique utilised in collection of data or evidence for analysis in order to uncover information to address the matters under investigation (Abutabenjeh & Jaradat, 2018). Facts can be expressed or presented in three

different ways, which are quantitatively, qualitatively or by mixing quantitative and qualitative ways depending on the objectives of study (Abutabenjeh & Jaradat, 2018).

In the context of this research, a qualitative inquiry was employed; first to scrutinise relevancy of the previous study and its future needs and later, to develop this C15: Manufacture of Leather and related products Occupational Framework. To ensure the credibility and robustness of the findings, data was triangulated from multiple methods of data collection, namely document review, one-to-one interview, Focus Group Discussion (FGD) and non-participatory observations (Yin, 2018). This triangulation technique, or combining data from multiple sources, is critical for developing converging lines of inquiry (Patton, 2002).

The following Table 3.1 is the research design illustrating the stages undertaken in conducting this study in order to develop these Manufacturer of Leather and related products OF.

Table 3.1: Research Stages

STAGES	RESEARCH ACTIVITIES
<i>PHASE 1:</i> <i>Literature Review and Baseline Information Analysis</i>	Preliminary information gathering through review of relevant literature, reports, websites, databases, etc.
<i>PHASE 2:</i> <i>Data Collection</i>	Document review of policy, regulation and industry report
	One-to-one interview session with key industry experts and association leaders.
	Workplace non-participatory observations
	Focus Group with industry expert
	Industry benchmarking visit

PHASE 3:*Data Analysis*

Conduct content analysis.

Finding validation through FGD and Engagement Session in conference

PHASE 4:*Document Writing*

Writing up all chapters of the OF

The following sections elaborate on the key activities involved following the research design above.

3.2.1 Phase 1: Review of Existing Literature and Baseline Information Analysis

The main aim for this research is to develop an OF. Preliminary information was gathered through reviewing previous documents related to the industry under study to provide underpinning insight into the industry as well as evidence to support assumptions and arguments. This method necessitates a thorough examination of existing literature as well as reports from relevant official agencies that include both published and unpublished materials, colloquially known as grey literature (Auger, 2017). Grey literature is an important component of a systematic review and adds value to the review because it is frequently more current than published literature and has less publication bias. Unpublished studies, reports, dissertations, conference papers and abstracts, blog posts, videos, white papers, and governmental research reports are all considered grey literature (Garousi, Felderer, et. al., 2019).

The review searches, identifies, selects, evaluates and synthesizes research evidence to support the OF document's objectives. This method is intended to provide a macro snapshot of the industry landscape and outlook as reported in the literature review chapter.

The research objectives dictated which information sources should be searched. As a result, general searches for information relevant to the manufacturing of leather and related products were conducted at first. The importance of narrowing the scope to answer the questions underhand grows as the topic of the synthesis becomes more focused. There were three main sources considered in this systematic review:

a. Economic Database

Economic Databases is used for obtaining all sorts of statistical information related to employment in the Manufacture of Leather and Related Products industry that is highly relevant to this study. Information from the Economic Databases would provide a snapshot of the current landscape of the sector. The following are the databases referred to in this study:

- i. Department of Statistics Malaysia (DoSM)
- ii. Statista
- iii. World Bank

b. Databases from other agencies

Databases from both local and international agencies that contained relevant information on the Manufacture of Leather and Related Products industry were referred. Among the databases applied were:

- i. International Standard Industrial Classification of All Economic Activities (ISIC);
- ii. Malaysia Standard Classification of Occupations (MASCO) 2020.
- iii. Economic Planning Unit
- iv. Social Security Organisation (SOCSO);
- v. MYFutureJobs Portal (SOCSO, Ministry of Human Resources Malaysia);
- vi. MySPIKE (Department of Skills Development, Ministry of Human Resources Malaysia);
- vii. O*NET Online (U.S. Department of Labour);
- viii. The Singapore Standard Occupational Classification (SSOC)

These databases were in the form of both online and offline sources. From the listed databases, specific documents and reports were retrieved and reviewed, including:

- i. Annual Economics Statistics for Manufacturing 2022
- ii. Manufacturing Industry Capacity Utilisation Statistics, First Quarter 2023

- iii. Malaysia Digital Economy Blueprint
- iv. National Fourth Industrial Revolution Policy
- v. Monitoring Occupational Shortages: Lessons from Malaysia's Critical Occupations List 2019 by World Bank Group;
- vi. Malaysia Standard Industrial Classification (MSIC) 2008;

c) Published Document

A review of relevant scientific publications in the industry was also carried out. Information from these three main sources was elaborated in Chapter 2 Literature Review as well as supporting the findings from the analysis; such as the followings:

- i. The sector's economic performance as measured by several macroeconomic indicators such as industry growth and employment statistics;
- ii. The industry outlook as compared to regional and global perspectives;
- iii. The start of technological development in the industry;
- iv. The identification of relevant legislations and stakeholders;
- v. The underlying background of the sector's issues; and
- vi. The support for the findings from data analysis.

3.2.2 Phase 2: Data Collection

This study adopted different data collection strategies such as document review, one-to-one interviews, Focus Group Discussion (FGD) and non-participatory observations. Additionally, an industry benchmarking visit coupled with document reviews were useful to address Objective 1. While other techniques seek to obtain data verbatim from the participants particularly to answer Objectives 2 to Objectives 5. See Figure 9. This triangulation technique allows the researcher to look at the specific situation from different angles (Yin, 2003) and overcome equivocal evidence or **biased** views to influence the direction of the findings and conclusions (Gibbert & Ruigrok, 2010).



Figure 9: Data Collection Strategies

a. Document Review

Document review is a systematic collection, documentation, analysis and interpretation, and organisation of data as a data collection method in research. Documents can be external or internal to an organisation and they can be in the form of hard copy or electronic. As a useful contribution to qualitative research designs, document review as a method can result in evidence-based guidelines and best practices. All methods have advantages and disadvantages; thus, the selection of any method, including document review must be consistent with the research question and yield substantive data in order to answer the research question, often serving as a starting point in conjunction with other methods to triangulate data.

A literature review is essentially a summary of the published literature, 'a critical appraisal of other research on a given topic that helps to put that topic in context' (Machi & McEvoy, 2012, p. 2), whereas a document review typically involves a range of specialised techniques of analysis, interpretation, and data handling that are not typically used in literature reviews (Lankshear & Knobel, 2004, p. 58).

The documents referred to in this study is mainly to examine the relevance of the previous research findings and documents to the research understudy.

b) One-to-one interview with selected industry expert

One-to-one interviews were the main technique used to elicit information due to the limitation in getting the industry experts who are willing to contribute in this research. This is due to the strike of pandemic Covid-19, many establishments have ceased operation and either buy from other manufacturing abroad or venture into other business. The participants were selected through either recommendation from the association or the participants' circle of friends. The list of interview participants is included in the list of development panel members in **Annex 2: List of Contributors**. During each interview, the focus of discussion was on developing the OS, OR and OD.

Thus, three (3) semi-structured questions were constructed to further guide the session in order to address the objectives. Semi-structured interviews are used because they are similar to everyday conversation which allow participants to respond in their own terms, language and thoughts (Qu & Dumay, 2011). It adds flexibility to the investigation (Cohen et al., 2007) as it is guided by some predetermined knowledge, which in this context, the regulator's guidelines. Even though the questions in semi-structured interviews were predetermined through the use of a list of questions as the interview guide, the sequence of the questions can be modified following the participants' construction of ideas (Robson, 2002).

The following are the semi-structured questions used:

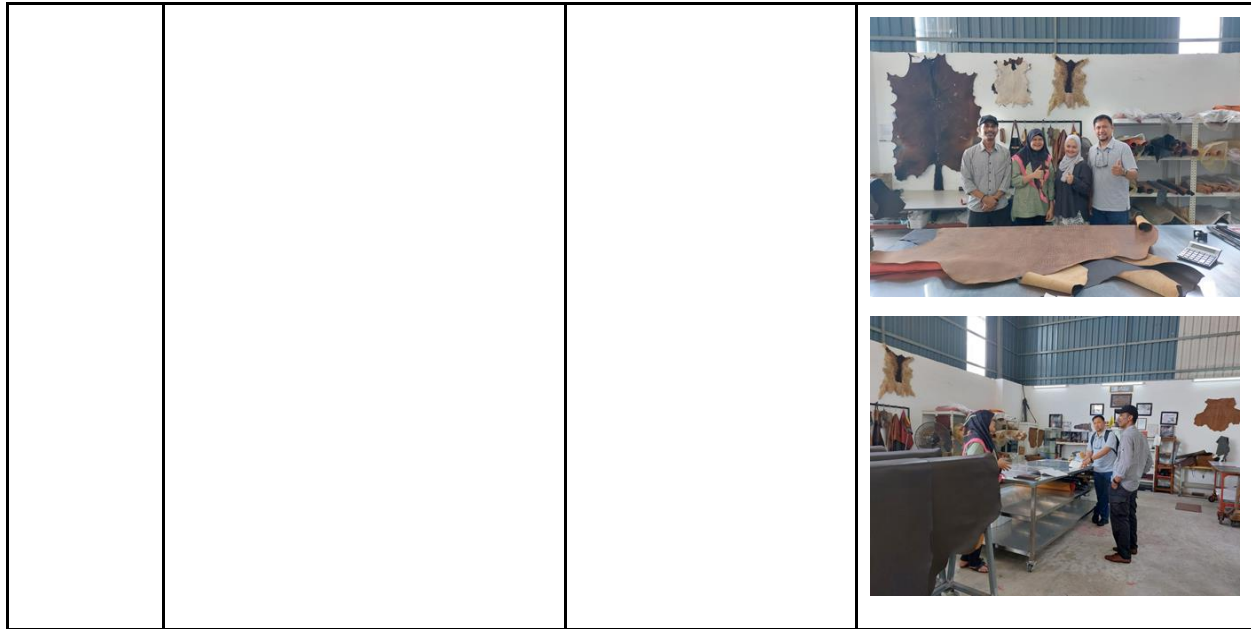
- i. What are the job titles for each work process identified here?
- ii. Can you describe the functions and the work activities of the job title?
- iii. With reference to the MOSQF descriptor, which level will the job titles be within the occupational structure?

Interviews were conducted based on the convenience time of the industry experts. The details of the sessions are included in the following Table 3.2.

Table 3.2: Interview Schedule

Date	Organisation	Participants	Picture
23/8/2023	Malaysia Footwear Manufacturers Associations (FMFA) Malaysia Textile and Apparel Centre (MATAC)	Hasnah Ahmad Maggie Chan Wong Dyi Liang	
29/8/2023	JV Footwear Trading Sdn Bhd	Wong Dyi Liang Steven Fan	
12/9/2023	Transmacro Trading	Ken Chan	
18/9/2023	Kenny Leather (Malaysia) Sdb Bhd	Norrisan Hashim Nasrul Asim Mohammad Diah	

			
22/9/2023	Fion Poon Fashion	Fion Poon	
22/9/2023	Kulitkraf Sdn Bhd	Rafnornadiah Mohd Fadhlullah Mohd Suhaimi	 
27/9/2023	SIL Leather Malaysia	Ismail Yumar Siti Hasnisah Sahari	



Each of the sessions took approximately 2-3 hours. While conducting the interview, researchers also embarked on the non-participatory workplace observations.

c) Non-participatory workplace observations

Non-participatory observations in the workplace were used to triangulate the data collected during the interview. In other words, the information was supported by direct visual data that could be utilised to deduce the real pattern of behaviour in the situation (Patton, 2002). With the information presented during the interview, the participant was not only discussing the work process, but also demonstrating how the task is done or, on occasion, witnessing the job being done by the employees. Field notes were obtained during the observation procedure to capture observable events and task engagement by capturing any relevant behaviour, incidents and actions as they occurred.

d) Focus Group Discussion

To validate the data collected through interview sessions and workplace observations, a Focus Group Discussion (FGD) was held with the association representative and a group of industry experts who were both appointed as development panels. The participation of industry experts on the development panel ensured that the Occupational Framework was current and relevant. The discussions were facilitated by the researchers to elicit information from the panels. Data was

collected from multiple perspectives or collective views simultaneously (Braun & Clarke, 2013) to provide input and verify the findings of the OF. In other words, the researcher brought a group of people together to discuss a specific topic in depth. This allows the focus group participants to hear from one another and reflect on their responses as a group. They can also question each other's reasoning for holding a particular viewpoint (Berg, Lune & Lune, 2012). This technique allows the understanding of how members of the group came to certain conclusions, which would not be possible by only conducting one-on-one interviews. During a focus group, an individual may respond in a specific way. Still, as he or she listens to others' responses, he or she may want to qualify or modify a viewpoint that is useful in eliciting a wide range of different responses (Bryman & Buchanan, 2018).

The FGD session would benefit in two (2) ways:

- i. To validate the data obtained from the one-to-one interview and observations,
- ii. To provide answers to identify critical jobs, competency in demand, jobs relevant to the technology advancement and industrial revolution, and the emerging skills.

Four (3) main semi-structured questions were constructed as follows:

- i. What are the critical jobs within the OS? How to define them?
- ii. What are the relevant job titles that are in line with the technology advancement and industrial revolution?
- iii. What are the emerging skills for the industry and what causes them?

Additionally, a question on the current and future challenges of the industry was also posted during the FGD.

- i. What are the challenges commonly faced by the industry players of this sector? What are the causes and how to mitigate them?

The FGD session was conducted on 26 November 2023 at Whydham Grand Bangsar. Four (4) participants were selected from those attended the one-to-one interview while the remaining were industry expert representing various establishment. The list of the FGD participants is as follows:

Table 3.3: Participants for Focus Group Discussion

	NAME	COMPANY	POSITION	YEARS IN THE INDUSTRY
1.	Ken Chan	Transmacro Trading	Managing Director / Owner	20 years
2.	Max Kong	Mxmaniere	Managing Director / Owner	20 years
3.	Ismail Yumar	SIL Leather	Managing Director / Owner	18 years
4.	Norissan Hashim	Kenny Leather	Human Resource Manager	7 years
5.	Hasnah Ahmad	Malaysian Textile and Apparel Centre	Executive Director	10 years
6.	Evelyn Hew	Malaysian Gift and Premium Association	Managing Director / Owner	10 years
7.	Siti Hasnisah Sahari	SIL Leather	Production Director	15 years

The participants who involved either in the interview or in FGD were appointed as the development panels for this OF as listed in **Annex 2: List of Contributors**.



Figure 10: Focus Group Discussion

e) Industry benchmarking visit

Benchmarking, the process of continuously comparing and measuring one's own operations against other organisations around the world to gain information on their practices, processes, and methodologies, is an important tool for helping an operation identify concrete practices that can be implemented to improve its performance. Benchmarking visit benefit this study in providing an opportunity to observe and learn best practices that allows the discovery of what and where to improve. In particular, the visit aims to gauge industry standard and provide a basis for comparison in setting the relevancy and needs for the industry to grow. Exposure to numerous approaches and perspectives fosters innovation while also assisting organisations in adapting and integrating effective practices from many cultural contexts.

From 18 to 20 December 2023, a benchmarking visit was undertaken to gain a broader view on best practices in the Indonesian leather sector. The delegation was led by the researcher and a few others including two (2) industry representatives, two (2) JPK representatives, and the UPUM project manager. An Indonesian industry representative also supported the delegation in connecting with local industry players in Garut Indonesia's leather district.

Before visiting the tanneries, the delegation went to the Leather Training Centre, owned by the local government, in Garut to learn more about the leather business in Indonesia and in Garut in particular. Garut is renowned as the Leather District because it actively operates the entire leather production environment. The Head of the Training Centre briefed the group for over an hour before bringing them into the workshop to see how things were going.

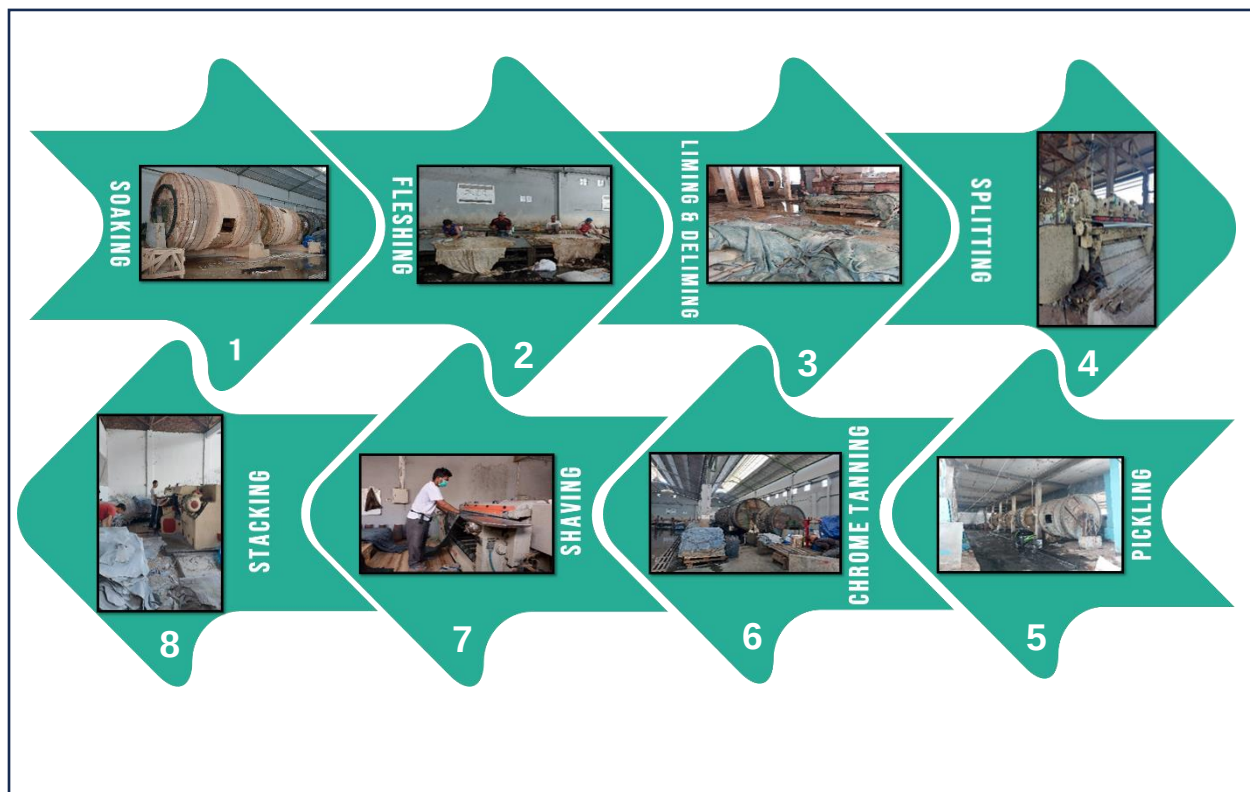


Figure 11: Visit at the Leather Training Centre, Garut

Three (3) functioning tanneries allowed the delegation to learn firsthand about the leather manufacturing process, from raw hides/skin to finished leather. The tanneries were privately owned and had been in operation for several generations. The tanneries representing different set up in tannery process;

- i) Tannery with semi-automated process
- ii) Tannery operating fully automated process
- iii) Tannery with manual operation

Each visit lasted between one (1) and two (2) hours, and photographs were taken to document what occurred at the site. Concurrently, the researcher interviewed the workers to gain knowledge about the work activities for which they are responsible. Below are several images which depict regular job activities in a leather tannery operation.



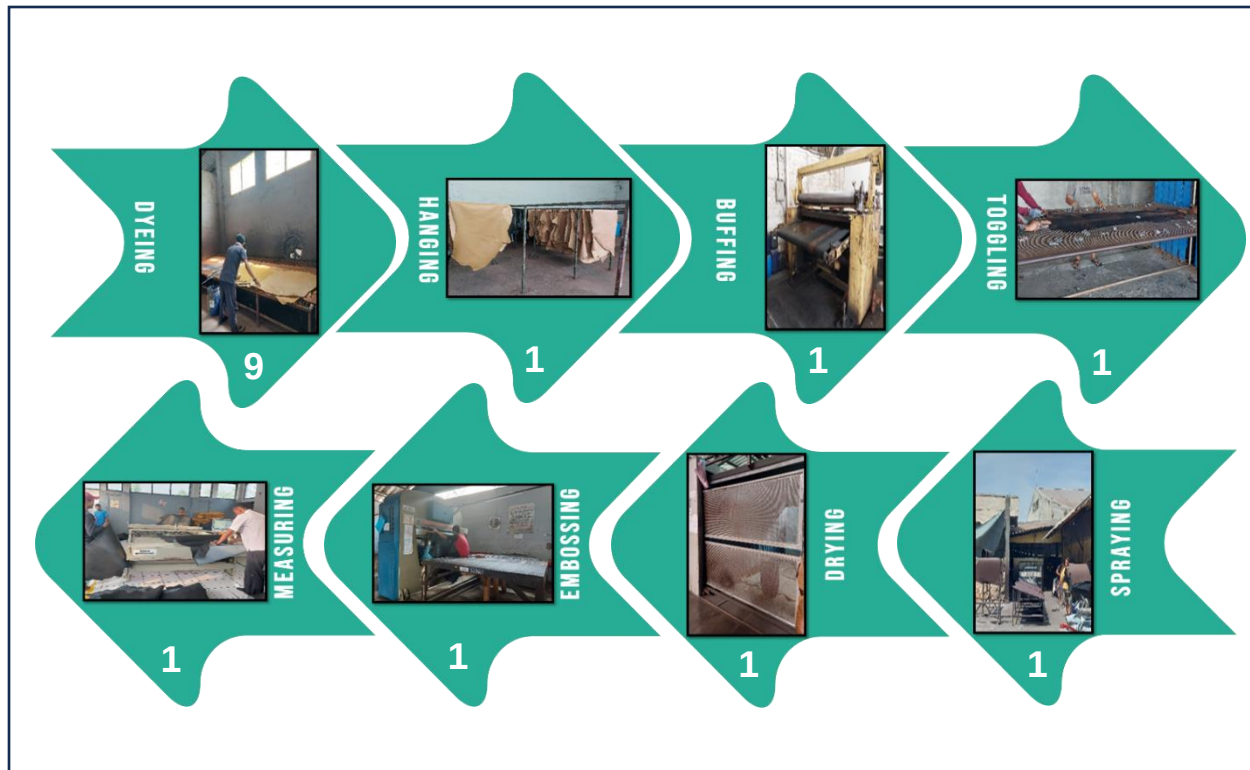


Figure 12: Benchmarking visit (Source: Researcher's collection)

3.2.3 Phase 3: Data Analysis and Verification of Findings

All data collected from one-to-one interviews and observations were discussed and analysed using the content analysis method was conducted. The entire one-on-one interviews were verbatim recorded and transcribed. According to Roulston and Choi (2018), recording is an essential part of qualitative data collection and its analysis as it improves the broadness and accuracy of qualitative data. Additionally, recording also allows the researcher to fully concentrate on asking questions and responding to the interviewee's answers (Neal et al., 2015).

The data was then reviewed and interpreted to generate codes and emerging themes. The findings section was organised around recurring issues and main themes that summarised the responses of all participants. Iterating between data and the regulator's guidelines was used to carry out the process. Industry experts were then validating the findings through a FGD session to ensure their dependability and accuracy.

The following were the results of data analysis:

- a. Development of Occupational Structure, Occupational Responsibilities and Occupational Descriptions;
- b. Analysis of jobs in demand and critical jobs;
- c. Analysis of competency in demand;
- d. Determination of the jobs relevant to the latest technology;
- e. Identification of the emerging skills; and
- f. Identification of issues relevant to the industry.

The finding was also validated through a presentation and engagement session at the International Conference on Sustainability Education Development 2023 organised by University Malaya on 25 October 2023.

3.2.4 Phase 4: Document Writing

Writing up the document was done progressively. The document reported the whole process of the study and captured the findings in accordance with the research objectives.

3.3 Sampling Strategy for Focus Group Discussion and one-to-one interview

The participants were selected based on the purposive sampling, a non-random sampling method in which “the researcher specifies the characteristics of the population of interest, and locates individuals with those characteristics” (Johnson & Christensen, 2010, page 231). Therefore, such individuals would be information-rich cases that are suitable for in-depth study (Wellington, 2000). This is because the unit of analysis is appropriately chosen based on “what is happening to individuals in a setting and how individuals are affected by the setting” (Patton, 2002, page 228). This strategy is most beneficial when data is investigated, evaluated and analysed simultaneously as it is gathered (Hoeber et al., 2017).

In the context of this study, there are three (3) conditions for selecting the panels:

- a) the selected industry panel directly involved or experienced the phenomenon or event being studied,
- b) ability to communicate with researchers,

- c) be prepared to provide information on the experiences they have had (Magilvy & Thomas, 2009).

On top of that, the panels should have a minimum of seven (7) years of working experience at the management level in the area under study to ensure rich and reliable data gathering.

3.4 Conclusion

This chapter elaborated on the methodology used in the development of the Occupational Framework which went through 4 stages such as the literature review, data collection, data analysis and document writing. The findings on the Occupational Structure, Occupational Responsibilities and Description and competency in demand as identified through one-to-one interview coupled with workplace non-participatory observation. Data was then validated through the FGD session to ensure its applicability, validity and reliability. The findings are presented in the next chapter, Chapter 4 Findings.

issues related to the Manufacture of Leather and Related Products sector were also discussed, examined and reported.

4.2.1 Demographic Profile of the interviewed and focus group participants

According to the participants' demographic profile, it is concluded that:

- a) Participants representing the organisation have been in the industry for more than 7 years, so they are technically familiar with the sector's ecosystem.
- b) The selected representatives are at the managerial or leadership position.

Therefore, the information obtained in developing this document is pertinent to the Malaysian context, current, and representative of what is going on in the industry.

4.3 Relevance of previous research with the current and future needs of the industry

The Manufacture of Leather & Related Products sector encompasses businesses engaged in the production of leather, as well as the manufacturing of a wide range of leather products such as footwear, handbags, belts, wallets, and other accessories. Leather and derived products come from tanned animals' (cattle, sheep, goat, etc.) skins and hides in which a by-product of slaughterhouses in the meat supply chain, an end product of tanneries, and raw material for leather product manufacturers. The leather production process in general, involves the treatment and processing of animal hides/skins to produce high-quality leather materials such as tanning, dyeing, and finishing.

Based on the data and observation during the data collection stages, it is evident that this industry has gotten its own potential and demand. Although with the recent pandemic Covid19 and the globalisation, there are still companies that striving to gain back their market traction. Research, whether academic or industry-specific, provides valuable insights, data, and innovations that can shape the direction and growth of the sector. Following are finding on the relevancy of the previous research with current and future needs of the industry:

a) Technological Advancement

Incorporating Innovations: Previous research on cutting-edge technologies like automation, 3D printing, or sustainable processing methods can help the sector implement innovative and efficient production processes.

b) Market Trends and Consumer Preferences

Understanding Market Dynamics: Consumer preferences, market trends, and worldwide demand research may assist producers in aligning their production with current market needs and anticipating future trends.

c) Economic and Regulatory Insights

Navigating Economic aspects: Understanding the economic aspects that impact the business, such as trade rules, currency fluctuations, and market dynamics, may help manufacturers navigate problems and uncover possibilities.

d) Global Competitiveness

Benchmarking Against Global Standards: Comparing industrial practises to global standards helps identify areas for improvement, increasing Malaysian producers' competitiveness on the global arena.

e) Environmental Compliance and Social Responsibility

Environmental Standards: Research on sustainable and responsible practises can help the sector satisfy environmental laws while also exhibiting social responsibility.

The Malaysian Leather and Related Products sector may adapt to changing conditions, enhance efficiency, embrace innovation, and contribute to sustainable development by harnessing lessons from prior studies. To remain nimble and sensitive to changing market dynamics and global trends, industry stakeholders must stay up to date on the newest research results.

It is vital to stress that it is critical to cope with the leather tanning sector in Malaysia, which appears to be a sunset industry. Despite the high demand for leather and leather goods, local entrepreneurs are underrepresented. Among the difficulties cited by industry participants is the difficulty in complying with severe environmental standards, notably in waste disposal, which led to an increase in operational expenses and the complications of owning a water treatment facility. Furthermore, establishing a tannery necessitates a large capital investment in equipment, infrastructure, and raw materials. Entrepreneurs may face difficulties in obtaining the necessary financing, particularly if they are beginning the business with limited financial resources.

The leather market in Indonesia is expected to witness significant growth during the forecast period of 2020-2026. The key elements driving this expansion are increasing domestic

and international demand for leather items, improved disposable incomes and changing lifestyles among Indonesians, better economic conditions as well as the increasing number of tanneries. Furthermore, favourable government policies and initiatives have provided fuel for the country's manufacture of high-quality finished leather products.

Furthermore, as Indonesia's fashion sector grows, so does demand for various sorts of fashionable shoes made from good quality finished leathers produced locally as well as imported from other countries such as Italy and India. This has resulted in a greater emphasis on local tanning activities by both manufacturers and suppliers, which will push market size further in the coming years. According to a spokesperson for the leather industry participants in Garut, the origins of Indonesia's leather industry may be traced back centuries, reflecting the country's cultural emphasis on craftsmanship. Traditional tanning processes, which are frequently passed down through generations, have been critical in the manufacturing of high-quality leather products.

The leather training centre's head additionally pointed out that in recent years, Indonesia has emerged as a prominent player in the global leather market. Indonesia's leather industry contributes significantly to the country's export revenue. The demand for Indonesia leather products spans various regions, showcasing the competitiveness of the nation's offerings in the global market. The industry is divided into several categories, including tanning, footwear, and leather items. Leather processing and manufacturing operations can be found in major cities such as Jakarta and Bandung. He emphasized Indonesia's proficiency in both vegetable and chrome tanning processes. The adoption of traditional tanning technologies, combined with environmentally responsible methods, has helped Indonesian leather industry gain a competitive advantage in worldwide markets. As a result, the production of footwear becomes a pillar of Indonesia's leather industry. The country is a prominent global supplier of leather footwear, delivering a wide range of items to global markets. Aside from footwear, Indonesia is also known for producing leather goods such as jackets, handbags, purses, belts, and accessories. Craftspeople combine traditional techniques with modern designs to create products that appeal to both domestic and international customers.

Because of the expanding opportunities for leather products, the local authority in the Garut district is actively supporting local operators through various platforms and programmes.

According to the training centre's head, one of the greatest challenges for tannery operators is finding funds to invest in its automation and technology. Only a few tanneries currently have completely automated machines to help the otherwise labour-intensive process. As a result, the training centre purchased numerous machines and stationed them at the centre, where local operators can use them with minimal charges. The centre also has a water treatment and trash disposal section to help reducing the environmental impact of chemical waste. The programme has aided the industry's long-term viability and encouraged additional new entrants.

In terms of challenges, Indonesia faces similar issues as Malaysia. The environmental impact of traditional tanning processes, evolving customer preferences, and global economic uncertainty all pose obstacles. The industry is shifting towards more sustainable practices, with attempts to implement eco-friendly tanning techniques, decrease waste, and assure responsible material procurement gaining traction. Similarly, technological integration, such as automation and digital platforms, is becoming increasingly important for streamlining operations and addressing the expectations of a continuously changing market. Exploring new markets and diversifying product portfolios might assist Indonesian leather manufacturers in navigating global economic concerns. Targeting niche markets and emphasising unique selling points might help boosting competitiveness.

In conclusion, the Indonesian leather industry exemplifies the country's cultural legacy as well as its economic resiliency. The industry's blend of traditional craftsmanship, attention to quality, and flexibility to current trends prepares it for long-term success. The Indonesian leather sector can manage hurdles and continue to make a substantial influence on the world arena by embracing sustainability, technology and market diversification. In a constantly changing economic context, the future of Indonesia's leather sector looks promising, as long as players stay proactive in resolving issues and exploiting emerging opportunities.

From the visit, the industry landscape of the leather industry in Garut is illustrated in the form of SWOT Analysis as below:

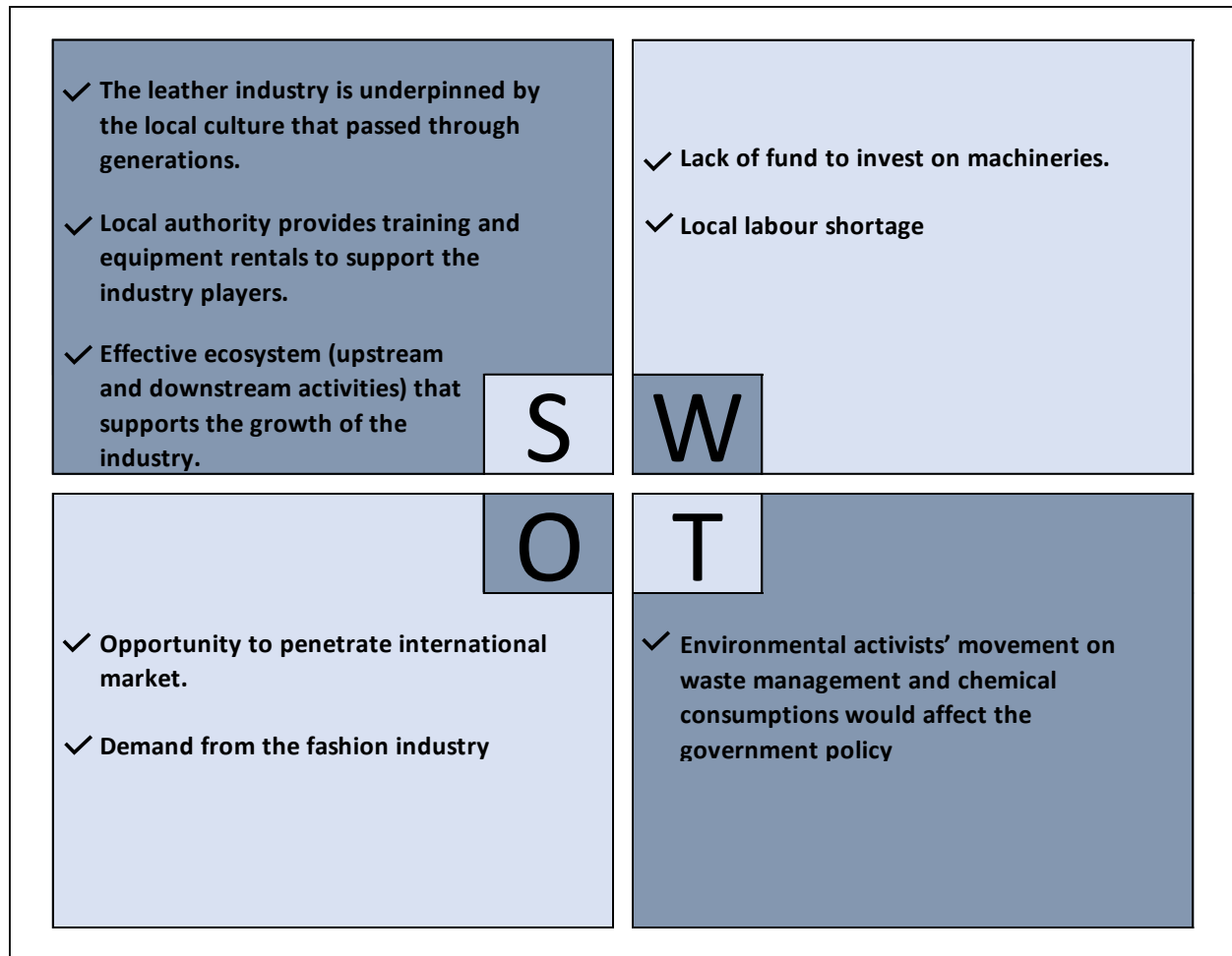


Figure 13: SWOT Analysis of Leather Industry in Garut, Indonesia

Learning from Indonesia, three (3) important enabling factors that support the industry growth are the following:

- i. Local government assistance in establishing equipment and infrastructure that require significant investment, so that local operators, especially the small-scale tanneries, can use them at a lower charge.
- ii. Train local entrepreneurs on methods of using the machines and equipment.
- iii. The local people's desire to preserve the industry that has been worked on for generations and in some way has become the culture of the local community.

Hence, Malaysia has an opportunity to revitalise its tanneries by taking a few steps from what Indonesia is doing.

4.4 Occupational Structure (OS)

Occupational Structure (OS) refers to the aggregate distribution of occupations in the organisation; classified according to skill level, economic function, or social status. Based on the interviews and FGD with the industry representatives, there are 24 job areas in total with overall of 97 job titles. 4 critical job titles and all 43 identified job titles are related to national technology and industrial revolution within the Manufacture of Leather and Related Products sector; all of which will be featured in the OS.

Based on the research undertaken, a total of 24 job areas were identified in C15 sector with a total of 97 job titles. 9 job areas were under C151 – Tanning and Dressing of Leather; Manufacture of Luggage, Handbags, Saddlery and Harness, Dressing and Dyeing of Fur with a total of 48 job titles identified. Whereas for C152 – Manufacture of Footwear, 21 job areas were identified with a total of 91 job titles. The OS is presented on the following pages; Table 4.2, Table 4.5, Table 4.8, Table 4.11, and Table 4.14. The tables also show critical job titles with a single asterisk (*), jobs relevant to technology and the industrial revolution with two asterisks (**), and critical job titles and jobs relevant to technology with triple asterisks (***) whereas Table 4.3, Table 4.6, Table 4.9, Table 4.12 and Table 4.15 provide a quantifiable summary of all job titles in the OS.

The job areas for Tanning and Dressing of Leather; Dressing and Dyeing of Fur are defined in Table 4.1:

Table 4.1: Description of Job Area for Tanning and Dressing of Leather; Dressing and Dyeing of Fur

C15110: Tanning And Dressing of Leather; Dressing and Dyeing of Fur		
No	Job Area	Description
1	Pre – Tanning	This job area includes preservation, soaking, unhairing, fleshing, splitting, liming, bating and pickling. This is the first process of tanning. The process may or may not include all the listed process depending on the company itself.
2	Tanning	The next job area involves chrome tanning, sammying, sorting, splitting and shaving.
3	Finishing	This job area involves neutralisation, hanging, re-tanning, dyeing, fat liquoring, setting and drying.

Table 4.2: Occupational Structure – C15110 (1/1)

	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	TANNING AND DRESSING OF LEATHER; DRESSING AND DYEING OF FUR		
AREA	(PRE – TANNING)	(TANNING)	(FINISHING)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	NJT	NJT	NJT
LEVEL 4	NJT	NJT	NJT
LEVEL 3	Pre – Tanning Supervisor**	Tanning Supervisor**	Finishing Supervisor**
LEVEL 2	Pre – Tanning Line Leader**	Tanning Line Leader**	Finishing Line Leader**
LEVEL 1	Pre – Tanning Operator	Tanning Operator	Finishing Operator

*NJT – No Job Title | * Critical Job/ High Demands | ** Jobs relevant to technology and industrial revolution | *** Critical Jobs and jobs relevant to technology and industrial revolution*

NOTE:

The findings indicate that the highest level of the job titles is identified at level 3. Job titles for the subsequent levels are related to other MSIC Code.

The job areas for Manufacturing of Luggage, Handbags and the Like, Saddlery and Harness are defined in Table 4.4:

Table 4.4: Description of Job Area for Manufacturing of Luggage, Handbags and the Like, Saddlery and Harness

C15120: Manufacture Of Luggage, Handbags and The Like, Saddlery and Harness		
1	Prototype Making	Prototype Making serves as a guide for creating the product, providing the framework for cutting identified material. This is the process where the product design is drafted in the form of 2D, technical drawing or a 3D model.
2	Material Preparation	Based on the prototype, identified material is then cut and prepared for the subsequent process. Techniques may involve cutting, sewing, gluing, embroidering, painting and many more.
3	Assembly	This job area involves assembling all the prepared materials for the end product. Techniques may include sewing, gluing, soldering and many more.
4	Quality Control	To make sure the products fulfil the necessary quality standards, this job area involves testing and inspecting their quality. Quality inspection is an essential step in the production process that makes sure the final product satisfies regulatory and consumer standards.
4	Finishing	This job area involves final touches like polishing, trimming, buffing, labelling and may involve packaging.

Table 4.5: Occupational Structure – C15120 (2/2)

	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS				
GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR				
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS				
AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Prototype Manager	NJT	NJT	Quality Control Manager	NJT
LEVEL 4	Prototype Maker Executive	Production Executive	Production Executive	Quality Control Executive	Production Executive
LEVEL 3	Prototype Maker Supervisor	Material Preparation Supervisor**	Assembly Supervisor**	Production Quality Control Supervisor**	Finishing Supervisor
LEVEL 2	Prototype Maker**	Material Preparation Line Leader**	Assembly Line Leader**	Production Quality Control Inspector**	Finishing Line Leader
LEVEL 1	Assistant Prototype Maker	Material Preparation Operator**	Assembly Operator**	NJT	Finishing Operator

NJT – No Job Title | * Critical Job/ High Demands | ** Jobs relevant to technology and industrial revolution | *** Critical Jobs and jobs relevant to technology and industrial revolution

The job areas for Manufacture of Leather Footwear are defined in Table 4.7:

Table 4.7: Description of Job Area for Manufacture of Leather Footwear

C15201: Manufacture Of Leather Footwear		
1	Prototype Making	Prototype Making serves as a guide for creating the product, providing the framework for cutting identified material. This is the process where the product design is drafted in the form of 2D, technical drawing or a 3D model.
2	Material Preparation	Based on the prototype, identified material is then cut and prepared for the subsequent process. Techniques may involve cutting, sewing, gluing, embroidering, painting and many more.
3	Sewing	The second job area involves stitching together every prepared material following the design. The upper is usually the first part to be stitched followed by the rest of the other parts.
4	Lasting	The Last is a shoemaker's foundation and is typically considered their most closely guarded secret. This process involves pulling the 'upper' over the last normally using specially device. This is the stage during which the shoe starts to acquire its appearance.
5	Quality Control	This phase entails a systematic procedure of inspecting, testing, and maintaining the consistent and intended quality of footwear goods throughout the production process.

6	Finishing	This stage entails improving the surface of the leather in order to increase its durability, look, and texture. It is critical to thoroughly prepare the leather before utilising finishing and polishing substances to achieve a high-quality final outcome.
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Table 4.8: Occupational Structure – C15201 (1/3)

DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS					
GROUP	(152) MANUFACTURE OF FOOTWEAR					
	MANUFACTURE OF LEATHER FOOTWEAR					
AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)	(LASTING)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Prototype Manager	NJT	NJT	NJT	Quality Control Manager	NJT
LEVEL 4	Prototype Maker Executive	Production Executive	Production Executive	Production Executive	Quality Control Executive	Production Executive
LEVEL 3	Prototype Maker Supervisor	Cutting Supervisor**	Sewing Supervisor**	Lasting Supervisor**	Production Quality Control Supervisor**	Finishing Supervisor
LEVEL 2	Prototype Maker**	Cutting Line Leader**	Sewing Line Leader**	Lasting Line Leader**	Production Quality Control Inspector**	Finishing Line Leader
LEVEL 1	Assistant Prototype Maker	Cutting Operator**	Sewing Operator**	Lasting Operator**	NJT	Finishing Operator

*JT – No Job Title | * Critical Job/ High Demands | ** Jobs relevant to technology and industrial revolution | *** Critical Jobs and jobs relevant to technology and industrial revolution*

The job areas for Manufacture of Plastic Footwear are defined in Table 4.10:

Table 4.10: Description of Job Area for Manufacture of Plastic Footwear

C15202: Manufacture Of Plastic Footwear		
1	Prototype Making	Prototype Making serves as a guide for creating the product, providing the framework for cutting identified material. This is the process where the product design is drafted in the form of 2D, technical drawing or a 3D model.
2	Material Preparation	The job area involves blending, marking, cutting and mixing identified plastic particles or materials based on prototype.
3	Assembly	The stage where all parts are joined together to form the final product.
4	Quality Control	This phase entails a systematic procedure of inspecting, testing, and maintaining the consistent and intended quality of footwear goods throughout the production process.
5	Finishing	This stage includes improving the surface of the end product in order to increase its durability, look, and texture as well as the final product design standard. It also usually involves labelling and packaging.

Table 4.11: Occupational Structure – C152 (2/3)

DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS				
GROUP	(152) MANUFACTURE OF FOOTWEAR				
	MANUFACTURE OF PLASTIC FOOTWEAR				
AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Prototype Manager	NJT	NJT	Quality Control Manager	NJT
LEVEL 4	Prototype Maker Executive	Production Executive	Production Executive	Quality Control Executive	Production Executive
LEVEL 3	Prototype Maker Supervisor	Marking & Cutting Supervisor**	Assembly Supervisor**	Production Quality Control Supervisor**	Finishing Supervisor
LEVEL 2	Prototype Maker**	Marking & Cutting Line Leader**	Assembly Line Leader**	Production Quality Control Inspector**	Finishing Line Leader
LEVEL 1	Assistant Prototype Maker	Marking & Cutting Operator**	Assembly Operator**	NJT	Finishing Operator

*JT – No Job Title | * Critical Job/ High Demands | ** Jobs relevant to technology and industrial revolution | *** Critical Jobs and jobs relevant to technology and industrial revolution*

The job areas for Manufacture of Rubber Footwear are defined in Table 4.13:

Table 4.13: Description of Job Area for Manufacture of Rubber Footwear

C15203: Manufacture Of Rubber Footwear		
1	Prototype Making	Prototype Making serves as a guide for creating the product, providing the framework for cutting identified material. This is the process where the product design is drafted in the form of 2D, technical drawing or a 3D model.
2	Material Preparation	Based on the prototype, identified material is then cut and prepared for the subsequent process. Techniques may involve cutting, sewing, gluing, embroidering, painting and more.
3	Sewing	The second job area involves stitching together every prepared material following the design. The upper is usually the first part to be stitched followed by the rest of the other parts.
4	Lasting	The Last is a shoemaker's foundation and is typically considered their most closely guarded secret. This process involves pulling the 'upper' over the last normally using specially device. This is the stage during which the shoe starts to acquire its appearance.
5	Quality Control	This phase entails a systematic procedure of inspecting, testing, and maintaining the consistent and intended quality of footwear goods throughout the production process.

Table 4.14: Occupational Structure – C15203 (3/3)

DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS				
GROUP	(152) MANUFACTURE OF FOOTWEAR				
	MANUFACTURE OF RUBBER FOOTWEAR				
AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Prototype Manager	NJT	NJT	Quality Control Manager	NJT
LEVEL 4	Prototype Maker Executive	Production Executive	Production Executive	Quality Control Executive	Production Executive
LEVEL 3	Prototype Maker Supervisor	Marking & Cutting Supervisor**	Assembly Supervisor**	Production Quality Control Supervisor**	Finishing Supervisor
LEVEL 2	Prototype Maker**	Marking & Cutting Line Leader**	Assembly Line Leader**	Production Quality Control Inspector**	Finishing Line Leader
LEVEL 1	Assistant Prototype Maker	Marking & Cutting Operator**	Assembly Operator**	NJT	Finishing Operator

*JT – No Job Title | * Critical Job/ High Demands | ** Jobs relevant to technology and industrial revolution | *** Critical Jobs and jobs relevant to technology and industrial revolution*

Table 4.15: Summary of Job Titles – C15203

SUMMARY OF JOB TITLE FOR C15203									
NO.	JOB AREA	JOB LEVEL							
		1	2	3	4	5	6	7	8
1	Prototype Making	1	1	1	1	1	NJT	NJT	NJT
2	Material Preparation	1	1	1	1	NJT	NJT	NJT	NJT
3	Assembly	1	1	1	1	NJT	NJT	NJT	NJT
4	Quality Control	NJT	1	1	1	1	NJT	NJT	NJT
5	Finishing	1	1	1	1	NJT	NJT	NJT	NJT

NO.	DETAILS	LEVEL							
		1	2	3	4	5	6	7	8
1	IDENTIFIED JOB TITLES (PER LEVEL)	4	5	5	5	2	0	0	0
2	TOTAL IDENTIFIED JOB TITLE	21							
3	CRITICAL JOB TITLES (PER LEVEL)	0	0	0	0	0	0	0	0
4	TOTAL CRITICAL JOB TITLES	0							
5	JOB TITLES RELEVANT TO TECHNOLOGY & INDUSTRIAL REVOLUTION (PER LEVEL)	2	4	3	0	0	0	0	0
6	JOB TITLES RELEVANT TO TECHNOLOGY & INDUSTRIAL REVOLUTION	9							

Table 4.16: Overall of Job Titles in C15: Manufacture of Leather and Related Product

No.	Occupational Structure (OS)	Total of Job Area	Total of Job Titles	Total of Critical Job Titles	Total Job Related to Technology and Industrial Revolution
1.	C151: Tanning and Dressing of Leather	3	9	0	6
2.	C151: Manufacture of Luggage, Handbags, Saddlery and Harness Dressing and Dyeing of Fur	5	21	0	9
3.	C152: Manufacture of Footwear				
	Leather	6	25	0	11
	Plastics	5	21	0	9
	Rubber	5	21	0	9
	Total	24	97	0	44

4.5 Occupational Responsibilities (OR)

The Occupational Responsibilities (OR) outline the primary responsibilities of each of the job titles stated in the Occupational Structure (OS), which also correlates to the job's area and level. OR in this section may include, but is not limited to, OR in the Manufacture of Leather and Related Products sector. The OR will be the future reference for the establishment of the National Occupational Skills Standard (NOSS) for the Manufacture of Leather and Related Products vocation under the MSIC 2008, Division C15 (Group: C151 and C152).

The OR are presented on the following pages, from Table 4.17 to Table 4.21.

Table 4.17: Occupational Responsibility (OR) C151 (1/2)

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	NJT	NJT	NJT
LEVEL 4	NJT	NJT	NJT
LEVEL 3	Pre – Tanning Supervisor - Determining the formula for chemical mixture for all pre-tanning process and procedure based on the quality of the raw hides/skins. - Setting the process indicators for drums, conveyers and machines - Inspecting and evaluating hides/skins after completing each	Tanning Supervisor - Determining the formula for chemical mixture for all tanning process to preserve wet hides/skins known as wet hides/skins. - Setting the process indicators for drums, conveyers and machines - Inspecting and evaluating hides/skins after completing each process and determine if the hides/skins need to	Finishing Supervisor - Determining the formula for chemical mixture for all finishing process and procedure based on the end product requirement - Setting the process indicators for machines in finishing process - Conducting inspection or checking of leather grade and category for

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
	process and determining if the hides/skins need to repeat the process or to proceed with the next process - Determining the allocation of raw hides/skins according to the machine capacity prior to the process - Setting the thickness of the machine blade - Supervising, train, reviewing, promoting, regulating and providing feedback to human resources regarding staff issues. - Monitoring and maintaining production schedule for pre-tanning department. - Coordinating availability of equipment so that production staff can do their job efficiently. - Ensuring preventative maintenance is carried out and repairs are done in an accurate and timely manner	repeat the process or to proceed with the next process - Determining the allocation of hides/skins according to the machine capacity prior to the process - Setting the thickness of the machine blade for shaving entire surface of hides/skins according to product required thickness - Determining the preparation stage and prioritise hides/skins to be processed based on specific requirement or customer request. - Supervising, training, reviewing, promoting, regulating and providing feedback to human resources regarding staff issues. - Monitoring and maintaining production schedule for tanning department. - Coordinating availability of equipment so that production staff can do their job efficiently. - Ensuring preventative maintenance is	selection quality, surface properties and thickness - Allocating leather for article determinant such colour, thickness, texture and size - Supervising, training, reviewing, promoting, regulating and providing feedback to human resources regarding staff issues. - Monitoring and maintaining production schedule for wet finishing department. - Coordinating availability of equipment so that production staff can do their job efficiently. - Ensuring preventative maintenance is carried out and repairs are done in an accurate and timely manner according to company maintenance procedure. - Utilising available personnel to meet the needs of the production schedule - Completing daily production reports

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
	according to company maintenance procedure. 10. Utilising available personnel to meet the needs of the production schedule. 11. Completing daily production reports and tally sheets and maintaining weekly time reports. 12. Complying with and enforcing company rules of conduct and safety. 13. Communicating with other supervisors and departments. 14. Preparing daily attendance reports and production reports. 15. Preparing incident reports and investigating all accidents related to pre-tanning production operation. 16. Recording document performance, discipline, counselling, achievements, etc. for the employee files.	carried out and repairs are done in an accurate and timely manner according to company maintenance procedure. 11. Utilising available personnel to meet the needs of the production schedule. 12. Completing daily production reports and tally sheets and maintain weekly time reports. 13. Complying with and enforcing company rules of conduct and safety. 14. Communicating with other supervisors and departments. 15. Preparing daily attendance reports and production reports. 16. Preparing incident reports and investigating all accidents related to tanning production operation. 17. Recording document performance, discipline, counselling, achievements, etc. for the employee files.	and tally sheets and maintain weekly time reports. 11. Complying with and enforce company rules of conduct and safety. 12. Communicating with other supervisors and departments. 13. Preparing daily attendance reports and production reports. 14. Preparing incident reports and investigate all accidents related to wet finishing production operation. 15. Recording document performance, discipline, counselling, achievements, etc. for the employee files

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
LEVEL 2	Pre – Tanning Line Leader / Pre-Tanning Senior Operator 1. Receiving raw hides/skins and store in well-ventilated area. 2. Operating the soaking / washing drum to remove dirt and salt as well as to restore moisture in the raw hides/skins. 3. Mixing chemical for pre-tanning process including soaking/washing, liming, fleshing and pickling. 4. Operating drum or pit for pre-tanning process including soaking/washing, liming, fleshing and pickling. 5. Operating rotating scraping rolls for fleshing process to remove the hides/skins of excess flesh and fat found on the hides/skins. 6. Operating splitting machine to separate or split hides/skins into two layers, top layer or outer surface and	Tanning Line Leader / Tanning Senior Operator 1. Preparing and mixing chemical for drum process. 2. Operating drum machine for tanning process including chroming, washing, fat liquoring (degreasing) and dyeing through. 3. Operating drum to pickling chrome tanned hides/skins to preserve as “wet blue”. 4. Operating drum for dyed and fat liquors to lend the hides/skins softness, stability and colour as per order. 5. Operating machines for related process such as pressing setter, shamming, bating and splitting whenever necessary based on the product requirement.	Finishing Line Leader / Finishing Senior Operator 1. Responsible for the selection of leather according to grades – visual inspection 2. Operating machine for related furnishing process including spraying, embossing and ironing depending on the product, pigments, oil or wax finishes are applied to ensure the level of shine required. 3. Carrying out the physical and chemical test to standards and customer specifications. 4. Measuring with the use of precision electronic equipment, packing and shipping to the customer. 5. Storing the finished material that are ready for delivery of the sample and

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
	split the lower parts or bottom layers. 7. Enforcing company policies and safety regulations. 8. Identifying and addressing safety issues in a timely manner.	6. Operate bating machine to remove unwanted particles to improve the properties of the leather such as its softness and pliability. 7. Operating milling drum to soften the hides/skins after hanging. 8. Operating staking machine to have a softened and supple material leather. 9. Operating the buffing machine for surface abrasion using special paper to lend sheen. 10. Cutting, selecting and trimming the hide. 11. Enforcing company policies and safety regulations. 12. Identifying and addressing safety issues in a timely manner.	just in time services. 6. Trimming hides/skins to ensure the finished product has regular edges. 7. Enforcing company policies and safety regulations. 8. Identifying and addressing safety issues in a timely manner.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
LEVEL 1	Pre – Tanning Operator 1. Unpacking raw hide packages received from the slaughter house to stop the animal skin from decomposing. 2. Heavily covering the hide with salt to cure or preserve the hides/skins resistant to bacterial growth. 3. After inspection by the supervisor the hides/skins are ready for storing and/or transporting, pressed hides/skins into packs. 4. Putting raw hides/skins into the soaking/washing drum machine or bath basin to make them pliable and to reintroduce moisture to the leather fibers. 5. Shaving or unhairing the	Tanning Operator 1. Carrying hides/skins to specific drums, conveyers and machines depending on the process stages 2. Performing hanging by suspending hides/skins from an overhead conveyor at ambient temperature. 3. Staking dry hides/skins using staking machine to softened hides/skins. 4. Adhering to safety and quality standards.	Finishing Operator 1. Carrying hides/skins to specific conveyers and machines 2. Arranging hides/skins according to the “head and tail” 3. Preparing hides/skins for toggling process by stretching hides/skins on a toggle frame which passed through the conveyor or tunnel or sun dry 4. Storing hides/skins on racks or shelves 5. Adhering to safety and quality standards.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
AREA LEVEL	(PRE – TANNING)	(TANNING)	(FINISHING)
	hides/skins and remove fats using hand tools and scraping / scudding fur from raw hides/skins. 6. Transferring raw hides/skins to a racking system and drums. 7. Adhering to safety and quality standards.		

Table 4.18: Occupational Responsibility (OR) C151 (2/2)

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	Prototype Manager 1. Manage and oversee the prototype room operation 2. Ensure adherence to quality standard 3. Work with cross functional team to ensure product meet the needs of all stakeholders 4. Design, build and integrate early mock-up samples for design of experiment verification and optimisation of different materials / components and process	NJT	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	conditions. 5. Generating evaluation / testing reports and sharing the learnings with design / processing team for major build improvement. 6. Communicating, internally and externally on the prototype guidance and ensuring the guidance is properly implemented. 7. Serves as the subject matter expert to internal business stakeholders on IP Protection, confidentiality, and prototype testing stages of product development. 8. Actively evaluating, analysing, and applying current fashion and industry trend and technology.		

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
LEVEL 4	Prototype Maker Executive 1. Coordinating the production of prototype from development of pattern specification to final fitting and approval 2. Maintaining accurate inventory of samples. 3. Providing sample support to designer, engineer and other stakeholders including the creation of sample mock up, the coordination of sample fitting. 4. Actively evaluating, analysing, and applying current fashion and industry trend and technology. 5. Ability to read assembly prints and assemble units per print.	Production Executive 1. Evaluating manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Controlling the usage of materials and inventories. 3. Developing manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 4. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout.	Production Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 3. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 4. Provide manufacturing decision-

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
		5. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 6. Prepare a product and process reports by collecting, analysing, and summarising information and trends.	making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 5. Prepare a product and process reports by collecting, analysing, and summarising information and trends.
LEVEL 3	Prototype Maker Supervisor 1. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 2. Monitor and maintain production schedule for prototype making department. 3. Coordinate availability of equipment so that production staff can do their job efficiently. 4. Ensure preventative maintenance	Material Preparation Supervisor 1. Increase inventory accuracy through monitoring of daily warehouse activities, cycle counts, receiving procedures and audit. 2. Improves methods and processes to increase productivity and quality while reducing costs. 3. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues.	Assembly Supervisor 1. Evaluate and expedite material orders that are aging 2. Provide input to capacity planning in charge with fluctuation in customer's production demands 3. Regular inspection of production machinery 4. Oversee the assembly of fabricated parts. 5. Ensure the production processes are carried out in an efficient and timely

	OCCUPATIONAL RESPONSIBILITY (OR)		
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	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure - Utilise available personnel to meet the needs of the production schedule - Maintain accurate report and prototype production. - Comply with and enforce company rules of conduct and safety. - Communicate with other supervisors and departments.	- Monitor and maintain production schedule for material preparation department. - Oversee cutting operator and cutting processes. - Coordinate availability of equipment so that production staff can do their job efficiently. - Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure - Utilise available personnel to meet the needs of the production schedule - Maintain accurate cutting report and material preparation production. - Comply with and enforce company rules of conduct and safety.	manner, while upholding quality standards. - Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. - Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure. - Communicates any issues or delays in material to impacted areas with corrective action plans and timings for resolution. - Plan labour effectively against weekly requirements to increase worker efficiency and minimise overtime.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
LEVEL 2	Prototype Maker 1. Create prototype using variety of methods including computer aided design and traditional drafting method 2. Work closely with designer to understand their vision and transfer their vision into workable prototype. 3. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 4. Ability to rotate through the assembly line, performing all prototype making operations. 5. Performs on-line and in-process visual inspection of pattern making to ensure it meets specifications	Material Preparation Line Leader 1. Operate and maintain all cutting equipment, shear, knives and saws 2. Ensure all cutting operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to material preparation production operator to meet production requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety issues in a timely manner. 9. Lead shift meetings and communicate	Assembly Line Leader 1. Operate and maintain all assembly equipment. 2. Ensure all assembly operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to assembly operator to meet production requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety issues in a timely manner. 9. Lead shift meetings and communicate information to

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	per work order and procedure instructions. 6. Operates equipment above reasonable expectancy levels. 7. Adheres to safety and quality standards. 8. Troubleshoot problem and make adjustment as needed 9. Communicate with production staff to ensure that prototype is accurate and can be easily followed. 10. Performs other related pattern making tasks, as required. 11. Stay up to date on the latest trend and technology to ensure that prototypes are produced in efficient and timely manner 12. Maintain a clean and organise work area.	information to employees. 10. Communicate with supervisor and other line leaders and departments to share information. 11. Maintain a clean and safe work environment.	employees. 10. Communicate with supervisor and other line leaders and departments to share information. 11. Maintain a clean and safe work environment.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
LEVEL 1	Assistant Prototype Maker 1. Assist the prototype maker in the creation of footwear and accessories prototype 2. Work with designer to understand and create 2D pattern. 3. Grade pattern for different sizes 4. Maintain pattern files. 5. Create technical packs for production. 6. Effective and safe use of equipment and materials to fabricate components, prototypes, fixtures, etc., from verbal instructions, 2D sketch/drawing, and/or 3D solid model. 7. Ability to read and interpret drawings and files.	Material Preparation Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications 3. Select and install cutting dies in machines 4. Position and clamp work pieces on table or in chucks. 5. Ability to rotate through the assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual inspection of material preparation to ensure it meets specifications per work order and procedure instructions. 7. Assist Team Leader and Technicians with product and/or machine change-	Assembly Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications. 3. Control and troubleshoot automated machine adjusting speed and feed, monitoring temperature, and finish material specification per set standard. 4. Perform any light maintenance that is needed on assigned machine and communicate any major issues to supervisor/lead 5. Ability to rotate through the assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual

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MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR		
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
		overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Reject product that are off specifications. 11. Adhere to safety and quality standards. 12. Perform other related material preparation tasks, as required.	inspection of material preparation to ensure it meets specifications per work order and procedure instructions. 7. Assist Team Leader and Technicians with product and/or machine change-overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Adhere to safety and quality standards. 11. Perform other related assembly tasks, as required.

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MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT
LEVEL 7	NJT	NJT
LEVEL 6	NJT	NJT
LEVEL 5	Quality Control Manager 1. Resolve production issue and troubleshoot problems 2. Maintain safe and orderly work environment 3. Prepare and maintain accurate report 4. Develop and implement a quality production program to ensure conformity of purchase material and final products to quality standards. 5. Maintain a high level of customer service by investigating and correcting issues and complaints relating to quality. 6. Analyse statistical data and product specifications to determine standards that meet quality and reliability expectancy of finished products. 7. Revise and update the quality control manual to	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
	incorporate statistical control programs. 8. Communicate with other departments 9. Work closely with vendors, customers, quality representatives, and company personnel to maximise product reliability and minimise costs. 10. Develop and maintain a supplier quality index, utilising statistical control programs. 11. Prepare for and represent the company during all audits and meetings. 12. Prepare all necessary reports as required by customers and staff personnel. 13. Design, develop, and implement quality control training programs for all quality control staff. 14. Manage and supervise quality control department to ensure high productivity and product integrity throughout the production cycle.	

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
LEVEL 4	Quality Control Executive 1. Responsible for quality assurance for production involving all products and processes. 2. Execute the quality management strategy and plans, including resources, systems, timescales, financials, to support, contribute to, and integrate within the organisation's annual business plan and long-term strategy. 3. Promote quality achievement and performance improvement throughout the organisation. 4. Set quality assurance compliance objectives and ensuring that targets are achieved. 5. Determine relevant quality-related training needs. 6. Maintain accurate and detail inspection record 7. Ensuring compliance with safety and health guidelines 8. Maintaining and calibrating inspection equipment.	Finishing Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 3. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 4. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 5. Prepare a product and process reports by collecting, analysing, and summarising information and trends.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
LEVEL 3	Quality Control Supervisor 1. Inspect footwear product and parts to ensure quality standards. 2. Analyse the material, component or model using relevant quality criteria. 3. Identify and report defects in product. 4. Notify operator of defects and request corrective action. 5. Maintain record of product inspection. 6. Participate in quality control meetings and reviews. 7. Train and develop production QC inspectors. 8. Resolve production QC issues and troubleshoot problems. 9. Maintain safe and orderly work environment. 10. Prepare report on production QC activities.	Finishing Supervisor 1. Able to identify characteristics, components, advantages and limitations of a wide range of materials used in footwear production. 2. Supervise the work of finishing line leaders 3. Oversee the daily operation of a finishing section including scheduling, monitoring and ensuring quality control 4. Resolve issue and trouble shoot problems in finishing section 5. Complete daily production reports and tally sheets and maintain weekly time reports. 6. Comply with and enforce company rules of conduct and safety. 7. Communicate with other supervisors and departments. 8. Improve methods and processes to increase productivity and quality while reducing costs. 9. Maintain safe and orderly work environment.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
LEVEL 2	Quality Control Inspector 1. Perform final inspection by following documented work instructions. 2. Compare the material and other components received from the suppliers, or the final product, to standards 3. Identify and report product defect 4. Maintain accurate and detail inspection record 5. Monitoring compliance with quality standard 6. Assist in problem identification and resolution 7. Conduct sample testing to validate product quality 8. Communicate effectively with stakeholders regarding quality requirements 9. Maintain and calibrating quality inspection equipment.	Finishing Line Leader 1. Monitor the individual components used for pack-out and replenish as needed to ensure steady flow of production. 2. Verify that proper labels and any requirements for the particular job are being adhered to. 3. Enforce company policies and safety regulations. 4. Assign duties to finishing production operator to meet production requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety and quality issues in a timely manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with other supervisors and departments to share information. 11. Meet production quota and deadline

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
LEVEL 1	NJT	Finishing Operator 1. Perform conditioning process according to approved procedure with standard tools. 2. Perform stacking process according to approved procedure with standard tools. 3. Perform buffing process according to approved procedure with standard tools. 4. Perform trimming process according to approved procedure with standard tools. 5. Perform oiling process according to approved procedure with standard tools. 6. Perform spraying process according to approved procedure with standard tools. 7. Perform polishing process according to approved procedure with standard tools. 8. Perform surface coating process according to approved procedure with standard tools. 9. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
		10. Perform on-line and in-process visual inspection of finishing to ensure it meets specifications per work order and procedure instructions. 11. Assist Team Leader and Technicians with product and/or machine change-overs. 12. Operate equipment above reasonable expectancy levels. 13. Adhere to safety and quality standards. 14. Inspect finish product for defect and make necessary repair.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT
LEVEL 7	NJT	NJT
LEVEL 6	NJT	NJT
LEVEL 5	Quality Control Manager 1. Resolve production issue and troubleshoot problems 2. Maintain safe and orderly work environment 3. Prepare and maintain accurate report 4. Develop and implement a quality production program to ensure conformity of purchase material and final products to quality standards. 5. Maintain a high level of customer service by investigating and correcting issues and complaints relating to quality. 6. Analyse statistical data and product specifications to determine standards that meet quality and reliability expectancy of finished products. 7. Revise and update the quality control manual to incorporate statistical control programs.	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	8. Communicate with other departments 9. Work closely with vendors, customers, quality representatives, and company personnel to maximise product reliability and minimise costs. 10. Develop and maintain a supplier quality index, utilising statistical control programs. 11. Prepare for and represent the company during all audits and meetings. 12. Prepare all necessary reports as required by customers and staff. 13. Design, develop, and implement quality control training programs for all quality control staff. 14. Manage and supervise quality control department to ensure high productivity and product integrity throughout the production cycle.	
LEVEL 4	Quality Control Executive 1. Responsible for quality assurance for production involving all products and processes. 2. Execute the quality management strategy and plans, including resources, systems, timescales, financials, to	Finishing Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	support, contribute to, and integrate within the organisation's annual business plan and long-term strategy. - Promote quality achievement and performance improvement throughout the organisation. - Set quality assurance compliance objectives and ensuring that targets are achieved. - Determine relevant quality-related training needs. - Maintain accurate and detail inspection record - Ensuring compliance with safety and health guidelines - Maintaining and calibrating inspection equipment.	from operators. - Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. - Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. - Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. - Prepare a product and process reports by collecting, analysing, and summarising information and trends.
LEVEL 3	Quality Control Supervisor - Inspect footwear product and parts to ensure quality standards. - Analyse the material, component or model using relevant quality criteria. - Identify and report defects in product.	Finishing Supervisor - Able to identify characteristics, components, advantages and limitations of a wide range of materials used in footwear production. - Supervise the work of finishing line leaders - Oversee the daily operation of a finishing section including

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	4. Notify operator of defects and request corrective action. 5. Maintain record of product inspection. 6. Participate in quality control meetings and reviews. 7. Train and develop production QC inspectors. 8. Resolve production QC issues and troubleshoot problems. 9. Maintain safe and orderly work environment. 10. Prepare report on production QC activities.	scheduling, monitoring and ensuring quality control 4. Resolve issue and trouble shoot problems in finishing section 5. Complete daily production reports and tally sheets and maintain weekly time reports. 6. Comply with and enforce company rules of conduct and safety. 7. Communicate with other supervisors and departments. 8. Improves methods and processes to increase productivity and quality while reducing costs. 9. Maintain safe and orderly work environment.
LEVEL 2	Quality Control Inspector 1. Perform final inspection by following documented work instructions. 2. Compare the material and other components received from the suppliers, or the final product, to standards 3. Identify and report product defect 4. Maintain accurate and detail inspection record 5. Monitoring compliance with quality standard 6. Assist in problem identification and resolution	Finishing Line Leader 1. Monitor the individual components used for pack-out and replenish as needed to ensure steady flow of production. 2. Verify that proper labels and any requirements for the particular job are being adhered to. 3. Enforce company policies and safety regulations. 4. Assign duties to finishing production operator to meet production requirements. 5. Ensure that employees receive appropriate training.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
	7. Conduct sample testing to validate product quality 8. Communicate effectively with stakeholders regarding quality requirements 9. Maintain and calibrating quality inspection equipment.	6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety and quality issues in a timely manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with other supervisors and departments to share information. 11. Meet production quota and deadline
LEVEL 1	NJT	Finishing Operator 1. Perform conditioning process according to approved procedure with standard tools. 2. Perform stacking process according to approved procedure with standard tools. 3. Perform buffing process according to approved procedure with standard tools. 4. Perform trimming process according to approved procedure with standard tools.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR	
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
		5. Perform oiling process according to approved procedure with standard tools. 6. Perform spraying process according to approved procedure with standard tools. 7. Perform polishing process according to approved procedure with standard tools. 8. Perform surface coating process according to approved procedure with standard tools. 9. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function. 10. Perform on-line and in-process visual inspection of finishing to ensure it meets specifications per work order and procedure instructions. 11. Assist Team Leader and Technicians with product and/or machine change-overs. 12. Operate equipment above reasonable expectancy levels. 13. Adhere to safety and quality standards. 14. Inspect finish product for defect and make necessary repair.

Table 4.19: Occupational Responsibility (OR) C152 (1/3)

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	Prototype Manager 1. Manage and oversee the prototype room operation 2. Ensure adherence to quality standard 3. Work with cross functional team to ensure product meet the needs of all stakeholders 4. Design, build and integrate early mock-up samples for design of experiment verification and optimisation of different materials / components and process conditions.	NJT	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
	5. Generate evaluation / testing reports and share the learnings with design / processing team for major build improvement. 6. Communicate, internally and externally, prototype guidance and ensure that guidance is properly implemented. 7. Serve as the subject matter expert to internal business stakeholders on IP Protection, confidentiality, and prototype testing stages of product development. 8. Actively evaluate, analyse, and apply current fashion and industry trend and technology.		
LEVEL 4	Prototype Maker Executive 1. Coordinate the production of prototype from development of pattern specification to final fitting and approval	Production Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly,	Production Executive 1. Manage all samples to ensure their movement through the product development process in coordination with the development

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
	2. Maintain accurate inventory of samples. 3. Provide sample support to designer, engineer and other stakeholders including the creation of sample mock up, the coordination of sample fitting. 4. Actively evaluate, analyse, and apply current fashion and industry trend and technology. 5. Ability to read assembly prints and assemble units per print.	- tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Control the usage of materials and inventories. 3. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 4. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 5. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 6. Prepare a product and process reports by collecting, analysing, and summarising information and trends.	- calendar 2. Strategically manage in partnership with design bill of material (BOMs), materials, issuing trials, tests, and colour approvals. 3. Communicate with all related departments to ensure product details are consistent with the adopted style profiles. 4. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 5. Control the usage of materials and inventories. 6. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
LEVEL 3	Prototype Supervisor 1. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 2. Monitor and maintain production schedule for prototype making department. 3. Coordinate availability of equipment so that production staff can do their job efficiently. 4. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure 5. Utilise available personnel to meet the needs of the production schedule 6. Maintain accurate report and prototype production.	Material Preparation Supervisor 1. Increase inventory accuracy through monitoring of daily warehouse activities, cycle counts, receiving procedures and audit. 2. Improve methods and processes to increase productivity and quality while reducing costs. 3. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 4. Monitor and maintain production schedule for material preparation department. 5. Oversee cutting operator and cutting processes. 6. Coordinate availability of equipment so that production staff can do their job efficiently. 7. Ensure preventative maintenance carried out and ensure repairs are done	Sewing Supervisor 1. Supervise and coordinate activities of workers engaged in operating sewing machines to assemble articles. 2. Able to do line balancing with work in progress control. 3. Examine articles to ensure adherence to quality standards 4. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 5. Monitor and maintain production schedule for sewing department. 6. Coordinate availability of equipment so that production staff can do their job efficiently. 7. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
	7. Comply with and enforce company rules of conduct and safety. 8. Communicate with other supervisors and departments.	in an accurate and timely manner according to company maintenance procedure 8. Utilise available personnel to meet the needs of the production schedule 9. Maintain accurate cutting report and material preparation production. 10. Comply with and enforce company rules of conduct and safety.	manner according to company maintenance procedure 8. Complete daily production reports and tally sheets and maintain weekly time reports. 9. Comply with and enforce company rules of conduct and safety. 10. Communicate with other supervisors and departments. 11. Prepare daily attendance reports and production reports.
LEVEL 2	Prototype Maker 1. Create prototype using variety of methods including computer aided design and traditional drafting method 2. Work closely with designer to understand their vision and transfer their vision into workable prototype. 3. Perform all processes within quality specifications while visually	Material Preparation Line Leader 1. Operate and maintain all cutting equipment, shear, knives and saws 2. Ensure all cutting operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to material preparation production operator to meet production requirements.	Sewing Line Leader 1. Audit sewing department activities and ensure all procedures are followed. 2. Enforce company policies and safety regulations. 3. Assign duties to sewing production operator to meet production requirements. 4. Ensure that employees receive

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
	monitoring the machine / equipment used to ensure proper function. 4. Ability to rotate through the assembly line, performing all prototype making operations. 5. Perform on-line and in-process visual inspection of pattern making to ensure it meets specifications per work order and procedure instructions. 6. Operate equipment above reasonable expectancy levels. 7. Adhere to safety and quality standards. 8. Troubleshoot problem and make adjustment as needed 9. Communicate with production staff to ensure that prototype is accurate and can be easily followed. 10. Performs other related pattern making tasks, as required. 11. Stay up-to-date with the latest trend and technology to ensure that	5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety issues in a timely manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with supervisor and other line leaders and departments to share information. 11. Maintain a clean and safe work environment.	appropriate training. 5. Maintain production records as required. 6. Maintain accurate attendance information and authorise work schedules for payroll purposes. 7. Identify and address safety issues in a timely manner. 8. Lead shift meetings and communicate information to employees. 9. Communicate with other supervisors and departments to share information. 10. Other duties may be assigned as needed.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
	prototypes are produced in an efficient and timely manner.		
LEVEL 1	Assistant Prototype Maker 1. Assist the prototype maker in the creation of footwear and accessories prototype 2. Work with designer to understand and create 2D pattern. 3. Grade pattern for different sizes 4. Maintain pattern files. 5. Create technical packs for production. 6. Effective and safe use of equipment and materials to fabricate components, prototypes, fixtures, etc. from verbal instructions, 2D sketch/drawing, and/or 3D solid model. 7. Ability to read and interpret drawings and files.	Material Preparation Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications 3. Select and install cutting dies in machines 4. Position and clamp work pieces on table or in chucks. 5. Ability to rotate through the assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual inspection of material preparation to ensure it meets specifications per work order and procedure instructions. 7. Assist Team Leader and Technicians	Sewing Operator 1. Operate sewing machine to assemble footwear components according to specifications 2. Using a variety of sewing technic including top-stitching, hemming and seaming. 3. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function. 4. Ability to rotate through the assembly line, performing all sewing operations. 5. Perform on-line and in-process visual Technicians with product and/or machine change-overs. 6. Operate equipment above reasonable expectancy levels.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)
		with product and/or machine change-overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Reject product that are off specifications. 11. Adhere to safety and quality standards. 12. Perform other related material preparation tasks, as required.	7. Ensure product assembled meets inspection of sewing to ensure it meets specifications per work order and procedure instructions. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Adhere to safety standards. 11. Perform other related sewing tasks, as required. 12. Inspect finish product and make necessary repairs 13. Maintain sewing machine and keep work area clean and organise

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(LASTING)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	NJT	Quality Control Manager 1. Develop and implement a quality production program to ensure conformity of purchase material and final products to quality standards. 2. Maintain a high level of customer service by investigating and correcting issues and complaints relating to quality. 3. Analyse statistical data and product specifications to determine standards that meet quality and reliability expectancy of finished products. 4. Revise and update the quality control manual to incorporate statistical control programs.	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(LASTING)	(QUALITY CONTROL)	(FINISHING)
		5. Work closely with vendors, customers, quality representatives, and company personnel to maximise product reliability and minimise costs. 6. Develop and maintain a supplier quality index, utilising statistical control programs, to assure that only high-quality vendors are retained. 7. Prepare for and represent the company during all audits. 8. Coordinate and approve all sample submissions of new products and engineering changes. 9. Prepare all necessary reports as required by customers and staff personnel. 10. Design, develop, and implement quality control training programs for all quality control staff. 11. Supervise quality control team leads and workers to ensure high productivity and product integrity throughout the production cycle.	

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(LASTING)	(QUALITY CONTROL)	(FINISHING)
		12. Provide support and expertise to quality control teams.	
LEVEL 4	Production Executive 1. Manage all samples to ensure their movement through the product development process in coordination with the development calendar 2. Strategically manage in partnership with design bill of material (BOMs), materials, issuing trials, tests, and colour approvals. 3. Communicate with all related departments to ensure product details are consistent with the adopted style profiles. 4. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and	Quality Control Executive 1. Responsible for quality assurance for production involving all products and processes. 2. Implement the quality management strategy and plans, including resources, systems, timescales, financials, to support, contribute to, and integrate within the organisation's annual business plan and long-term strategy. 3. Promote quality achievement and performance improvement throughout the organisation. 4. Set quality assurance compliance objectives and ensuring that targets are achieved. 5. Ensure compliance requirements with national and international standards and legislation are met.	Finishing Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 3. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(LASTING)	(QUALITY CONTROL)	(FINISHING)
	materials; conferring with equipment vendors; soliciting observations from operators. 5. Control the usage of materials and inventories. 6. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout.	6. Define quality procedures in conjunction with operations and production. 7. Determine relevant quality-related training needs. 8. Collate and analyse performance data and charts against defined parameters. 9. Ensure tests and procedures are properly understood, carried out and evaluated and that product off specification are investigated (if necessary). 10. Work with customers' auditors and ensures the execution of corrective action and compliance with customers' specifications. 11. Monitor performance through gathering relevant data and producing statistical reports. 12. Monitor data from measurement devices and initiates corrective action based on data analysis leading cross-functional improvement teams. 13. Perform related audit related to	equipment layout. 4. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 5. Prepare product and process reports by collecting, analysing, and summarising information and trends.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(LASTING)	(QUALITY CONTROL)	(FINISHING)
		production operation.	
LEVEL 3	Lasting Supervisor 1. Examine articles to ensure adherence to quality standards. 2. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 3. Monitor and maintain production schedule for lasting department. 4. Coordinate availability of equipment so that production staff can do their job efficiently. 5. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure 6. Utilise available personnel to meet the needs of the production schedule	Production Quality Control Supervisor 1. Oversee and verify testing results for products based on determining specification and compliance requirements. 2. Review current QC procedures, testing methods and outcomes to identify overall process efficiency and areas of improvement to augment proper adherence to relevant quality and safety regulatory and practices. 3. Audit the procedures of QC Technicians and train employees to ensure quality parameters are met. 4. Assist with plant regulatory, customer, and third-party audits by giving tours, explaining plant programs, and reviewing documents with auditors. 5. Develop and maintains professional working relationships with all internal	Finishing Supervisor 1. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 2. Monitor and maintain production schedule for finishing department. 3. Coordinate availability of equipment so that production staff can do their job efficiently. 4. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure 5. Utilise available personnel to meet the needs of the production schedule 6. Complete daily production reports and tally sheets and maintain

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(LASTING)	(QUALITY CONTROL)	(FINISHING)
	7. Complete daily production reports and tally sheets and maintain weekly time reports. 8. Comply with and enforce company rules of conduct and safety. 9. Communicate with other supervisors and departments. 10. Prepare daily attendance reports and production reports. 11. Prepare incident reports and investigate all accidents related to lasting department operation. 12. Document performance, discipline, counselling, achievements, etc. for the employee files. 13. Resolve production issue and troubleshoot problems 14. Meet production quota and deadline	and external parties and leverages network to compile research data for various projects and studies. 6. Investigate issues related to customer complaints and resolves all related issues. 7. Prepare various summaries and trend reporting with all associated analyses, as needed. 8. Assist with the development of standard operating procedures.	weekly time reports. 7. Comply with and enforce company rules of conduct and safety. 8. Communicate with other supervisors and departments. 9. Prepare daily attendance reports and production reports. 10. Prepare incident reports and investigate all accidents related to finishing production operation. 11. Document performance, discipline, counselling, achievements, etc. for the employee files.
LEVEL 2	Lasting Line Leader 1. Audit lasting production activities and ensure all procedures are	Production Quality Control Inspector 1. Perform final inspection by following documented work instructions.	Finishing Line Leader 1. Audit finishing production activities and ensure all procedures are

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
LEVEL \ AREA	(LASTING)	(QUALITY CONTROL)	(FINISHING)
	followed. - Enforce company policies and safety regulations. - Assign duties to lasting production operator to meet production requirements. - Ensure that employees receive appropriate training. - Maintain production records as required. - Maintain accurate attendance information and authorise work schedules for payroll purposes. - Identify and address safety issues in a timely manner. - Lead shift meetings and communicate information to employees. - Communicate with other supervisors and departments to share information. - Other duties may be assigned as needed.	- Perform visual inspection of optical parts. - Perform dimensional measurements with manual/hand gauges (callipers, micrometres, etc.). - Identify and report systematic and preventable non-conformance occurrences. - Reject defective product and document through the Company reporting process - Work with production to actively and urgently find continuous improvement opportunities.	followed. - Enforce company policies and safety regulations. - Assign duties to finishing production operator to meet production requirements. - Ensure that employees receive appropriate training. - Maintain production records as required. - Maintain accurate attendance information and authorise work schedules for payroll purposes. - Identify and address safety issues in a timely manner. - Lead shift meetings and communicate information to employees. - Communicate with other supervisors and departments to share information. - Other duties may be assigned as needed.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(LASTING)	(QUALITY CONTROL)	(FINISHING)
LEVEL 1	Lasting Operator 1. Able to use lasting machine with specified competency. 2. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function. 3. Ability to rotate through the lasting line, performing all lasting operations. 4. Perform on-line and in-process visual inspection of lasting to ensure it meets specifications per work order and procedure instructions. 5. Use specified lasting tools above reasonable expectancy levels. 6. Ensure product assembled meets quality standards. 7. Adhere to safety standards. 8. Perform other related lasting tasks, as required.	NJT	Finishing Operator 1. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function. 2. Ability to rotate through the assembly line, performing all finishing operations. 3. Perform on-line and in-process visual inspection of finishing to ensure it meets specifications per work order and procedure instructions. 4. Assist Team Leader and Technicians with product and/or machine change-overs. 5. Operate equipment above reasonable expectancy levels. 6. Ensure product assembled meets quality standards. 7. Reject product that are off

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF LEATHER FOOTWEAR		
AREA LEVEL	(LASTING)	(QUALITY CONTROL)	(FINISHING)
	9. Inspect finish product and make necessary repairs 10. Maintain lasting machine and keep work area clean and organise.		specifications. 8. Adhere to safety standards. 9. Perform other related finishing tasks, as required.

Table 4.20: Occupational Responsibility (OR) C152 (2/3)

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	Prototype Manager 1. Manage and oversee the prototype room operation 2. Ensure adherence to quality standard 3. Work with cross functional team to ensure product meet the needs of all stakeholders 4. Design, build and integrate early mock-up samples for design of experiment verification and optimisation of different materials / components and process conditions.	NJT	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	5. Generate evaluation / testing reports and share the learnings with design / processing team for major build improvement. 6. Communicate, internally and externally, prototype guidance and ensure that guidance is properly implemented. 7. Serve as the subject matter expert to internal business stakeholders on IP Protection, confidentiality, and prototype testing stages of product development. 8. Actively evaluate, analyse, and apply current fashion and industry trend and technology.		
LEVEL 4	Prototype Maker Executive 1. Coordinate the production of prototype from development of pattern specification to final fitting and approval	Production Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly,	Production Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design,

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	2. Maintain accurate inventory of samples. 3. Provide sample support to designer, engineer and other stakeholders including the creation of sample mock up, the coordination of sample fitting. 4. Actively evaluate, analyse, and apply current fashion and industry trend and technology. 5. Ability to read assembly prints and assemble units per print.	- tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Control the usage of materials and inventories. 3. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 4. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 5. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 6. Prepare a product and process reports by collecting, analysing, and summarising information and trends.	- fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 3. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 4. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 5. Prepare a product and process reports by collecting, analysing,

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
			and summarising information and trends.
LEVEL 3	Prototype Supervisor 1. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 2. Monitor and maintain production schedule for prototype making department. 3. Coordinate availability of equipment so that production staff can do their job efficiently. 4. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure 5. Utilise available personnel to meet the needs of the production schedule	Material Preparation Supervisor 1. Increase inventory accuracy through monitoring of daily warehouse activities, cycle counts, receiving procedures and audit. 2. Improves methods and processes to increase productivity and quality while reducing costs. 3. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 4. Monitor and maintain production schedule for material preparation department. 5. Oversee cutting operator and cutting processes. 6. Coordinate availability of equipment so that production staff can do their job efficiently.	Assembly Supervisor 1. Evaluate and expedite material orders that are aging 2. Provide input to capacity planning in charge with fluctuation in customer's production demands 3. Regular inspection of production machinery 4. Oversee the assembly of fabricated parts. 5. Ensure the production processes are carried out in an efficient and timely manner, while upholding quality standards. 6. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 7. Ensure preventative maintenance

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	6. Maintain accurate report and prototype production. 7. Comply with and enforce company rules of conduct and safety. 8. Communicate with other supervisors and departments.	7. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure 8. Utilise available personnel to meet the needs of the production schedule 9. Maintain accurate cutting report and material preparation production. 10. Comply with and enforce company rules of conduct and safety.	carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure. 8. Communicate any issues or delays in material to impacted areas with corrective action plans and timings for resolution. 9. Plan labour effectively against weekly requirements to increase worker efficiency and minimise overtime.
LEVEL 2	Prototype Maker 1. Create prototype using variety of methods including computer aided design and traditional drafting method 2. Work closely with designer to understand their vision and transfer their vision into workable prototype. 3. Perform all processes within quality	Material Preparation Line Leader 1. Operate and maintain all cutting equipment, shear, knives and saws 2. Ensure all cutting operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to material preparation production operator to meet production	Assembly Line Leader 1. Operate and maintain all assembly equipment. 2. Ensure all assembly operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to assembly operator

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	specifications while visually monitoring the machine / equipment used to ensure proper function. - Ability to rotate through the assembly line, performing all prototype making operations. - Perform on-line and in-process visual inspection of pattern making to ensure it meets specifications per work order and procedure instructions. - Operate equipment above reasonable expectancy levels. - Adhere to safety and quality standards. - Troubleshoot problem and make adjustment as needed - Communicate with production staff to ensure that prototype is accurate and can be easily followed. - Perform other related pattern making tasks, as required.	requirements. - Ensure that employees receive appropriate training. - Maintain production records as required. - Maintain accurate attendance information and authorise work schedules for payroll purposes. - Identify and address safety issues in a timely manner. - Lead shift meetings and communicate information to employees. - Communicate with supervisor and other line leaders and departments to share information. - Maintain a clean and safe work environment.	to meet production requirements. - Ensure that employees receive appropriate training. - Maintain production records as required. - Maintain accurate attendance information and authorise work schedules for payroll purposes. - Identify and address safety issues in a timely manner. - Lead shift meetings and communicate information to employees. - Communicate with supervisor and other line leaders and departments to share information. - Maintain a clean and safe work environment.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	11. Stay up to date on the latest trend and technology to ensure that prototypes are produced in efficient and timely manner.		
LEVEL 1	Assistant Prototype Maker 1. Assist the prototype maker in the creation of footwear and accessories prototype 2. Work with designer to understand and create 2D pattern. 3. Grade pattern for different sizes. 4. Maintain pattern files. 5. Create technical packs for production. 6. Effective and safe use of equipment and materials to fabricate components, prototypes, fixtures, etc. from verbal instructions, 2D sketch/drawing, and/or 3D solid model. 7. Ability to read and interpret drawings	Material Preparation Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications 3. Select and install cutting dies in machines 4. Position and clamp work pieces on table or in chucks. 5. Ability to rotate through the assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual inspection of material preparation to ensure it meets specifications per work	Assembly Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications. 3. Control and troubleshoot automated machine adjusting speed and feed, monitoring temperature, and finish material specification per set standard. 4. Perform any light maintenance that is needed on assigned machine and communicate any major issues to supervisor/lead

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF PLASTIC FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	and files.	order and procedure instructions. 7. Assist Team Leader and Technicians with product and/or machine change-overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Reject product that are off specifications. 11. Adhere to safety and quality standards. 12. Perform other related material preparation tasks, as required.	5. Ability to rotate through the assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual inspection of material preparation to ensure it meets specifications per work order and procedure instructions. 7. Assist Team Leader and Technicians with product and/or machine change-overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Adhere to safety and quality standards. 11. Perform other related assembly tasks, as required.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF PLASTIC FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT
LEVEL 7	NJT	NJT
LEVEL 6	NJT	NJT
LEVEL 5	Quality Control Manager 1. Resolve production issue and troubleshoot problems 2. Maintain safe and orderly work environment 3. Prepare and maintain accurate report 4. Develop and implement a quality production program to ensure conformity of purchase material and final products to quality standards. 5. Maintain a high level of customer service by investigating and correcting issues and complaints relating to quality. 6. Analyse statistical data and product specifications to determine standards that meet quality and reliability expectancy of finished products. 7. Revise and update the quality control manual to incorporate statistical control programs. 8. Communicate with other departments	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF PLASTIC FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	9. Work closely with vendors, customers, quality representatives, and company personnel to maximise product reliability and minimise costs. 10. Develop and maintain a supplier quality index, utilising statistical control programs. 11. Prepare for and represent the company during all audits and meetings. 12. Prepare all necessary reports as required by customers and staff personnel. 13. Design, develop, and implement quality control training programs for all quality control staff. 14. Manage and supervise quality control department to ensure high productivity and product integrity throughout the production cycle.	
LEVEL 4	Quality Control Executive 1. Responsible for quality assurance for production involving all products and processes. 2. Execute the quality management strategy and plans, including resources, systems, timescales, financials, to support, contribute to, and integrate within the organisation's annual business plan and long-term strategy.	Finishing Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Develop manufacturing processes by studying product

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF PLASTIC FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	3. Promote quality achievement and performance improvement throughout the organisation. 4. Set quality assurance compliance objectives and ensuring that targets are achieved. 5. Determine relevant quality-related training needs. 6. Maintain accurate and detail inspection record 7. Ensuring compliance with safety and health guidelines 8. Maintaining and calibrating inspection equipment.	- requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 3. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 4. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 5. Prepare a product and process reports by collecting, analysing, and summarising information and trends.
LEVEL 3	Quality Control Supervisor 1. Inspect footwear product and parts to ensure quality standards. 2. Analyse the material, component or model using relevant quality criteria. 3. Identify and report defects in product. 4. Notify operator of defects and request corrective action. 5. Maintain record of product inspection. 6. Participate in quality control meetings and reviews.	Finishing Supervisor 1. Able to identify characteristics, components, advantages and limitations of a wide range of materials used in footwear production. 2. Supervise the work of finishing line leaders 3. Oversee the daily operation of a finishing section including scheduling, monitoring and ensuring quality control 4. Resolve issue and trouble shoot problems in finishing section

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF PLASTIC FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	7. Train and develop production QC inspectors. 8. Resolve production QC issues and troubleshoot problems. 9. Maintain safe and orderly work environment. 10. Prepare report on production QC activities.	5. Complete daily production reports and tally sheets and maintain weekly time reports. 6. Comply with and enforce company rules of conduct and safety. 7. Communicate with other supervisors and departments. 8. Improve methods and processes to increase productivity and quality while reducing costs. 9. Maintain safe and orderly work environment.
LEVEL 2	Quality Control Inspector 1. Perform final inspection by following documented work instructions. 2. Compare the material and other components received from the suppliers, or the final product, to standards 3. Identify and report product defect 4. Maintain accurate and detail inspection record 5. Monitoring compliance with quality standard 6. Assist in problem identification and resolution 7. Conduct sample testing to validate product quality 8. Communicate effectively with stakeholders regarding quality requirements. 9. Maintain and calibrating quality inspection equipment.	Finishing Line Leader 1. Monitor the individual components used for pack-out and replenish as needed to ensure steady flow of production. 2. Verify that proper labels and any requirements for the particular job are being adhered to. 3. Enforce company policies and safety regulations. 4. Assign duties to finishing production operator to meet production requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety and quality issues in a timely

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF PLASTIC FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
		manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with other supervisors and departments to share information. 11. Meet production quota and deadline
LEVEL 1	NJT	Finishing Operator 1. Perform conditioning process according to approved procedure with standard tools. 2. Perform stacking process according to approved procedure with standard tools. 3. Perform buffing process according to approved procedure with standard tools. 4. Perform trimming process according to approved procedure with standard tools. 5. Perform oiling process according to approved procedure with standard tools. 6. Perform spraying process according to approved procedure with standard tools. 7. Perform polishing process according to approved procedure with standard tools.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF PLASTIC FOOTWEAR	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
		8. Perform surface coating process according to approved procedure with standard tools. 9. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function. 10. Perform on-line and in-process visual inspection of finishing to ensure it meets specifications per work order and procedure instructions. 11. Assist Team Leader and Technicians with product and/or machine change-overs. 12. Operate equipment above reasonable expectancy levels. 13. Adhere to safety and quality standards. 14. Inspect finish product for defect and make necessary repair.

Table 4. 21: Occupational Responsibility (OR) C152 (3/3)

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
LEVEL 8	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT
LEVEL 5	Prototype Manager 1. Manage and oversee the prototype room operation 2. Ensure adherence to quality standard 3. Work with cross functional team to ensure product meet the needs of all stakeholders 4. Design, build and integrate early mock-up samples for design of experiment verification and optimisation of different materials / components and process	NJT	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	conditions. 5. Generate evaluation / testing reports and share the learnings with design / processing team for major build improvement. 6. Communicate, internally and externally, prototype guidance and ensure that guidance is properly implemented. 7. Serve as the subject matter expert to internal business stakeholders on IP Protection, confidentiality, and prototype testing stages of product development. 8. Actively evaluate, analyse, and apply current fashion and industry trend and technology.		
LEVEL 4	Prototype Room Executive 1. Coordinate the production of prototype from development of pattern specification to final fitting	Production Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of	Production Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	and approval 2. Maintain accurate inventory of samples. 3. Provide sample support to designer, engineer and other stakeholders including the creation of sample mock up, the coordination of sample fitting. 4. Actively evaluate, analyse, and apply current fashion and industry trend and technology. 5. Ability to read assembly prints and assemble units per print.	product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Control the usage of materials and inventories. 3. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 4. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 5. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 6. Prepare product and process reports by collecting, analysing, and summarising information and trends.	knowledge of product design, fabrication, assembly, tooling, and materials; conferring with equipment vendors; soliciting observations from operators. 2. Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. 3. Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. 4. Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. 5. Prepare product and process reports by collecting, analysing,

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
			and summarising information and trends.
LEVEL 3	Prototype Maker Supervisor 1. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 2. Monitor and maintain production schedule for prototype making department. 3. Coordinate availability of equipment so that production staff can do their job efficiently. 4. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure. 5. Utilise available personnel to meet the needs of the production schedule.	Material Preparation Supervisor 1. Increase inventory accuracy through monitoring of daily warehouse activities, cycle counts, receiving procedures and audit. 2. Improves methods and processes to increase productivity and quality while reducing costs. 3. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 4. Monitor and maintain production schedule for material preparation department. 5. Oversee cutting operator and cutting processes. 6. Coordinate availability of equipment so that production staff can do their job efficiently.	Assembly Supervisor 1. Evaluate and expedite material orders that are aging 2. Provide input to capacity planning in charge with fluctuation in customer's production demands 3. Regular inspection of production machinery 4. Oversee the assembly of fabricated parts. 5. Ensure the production processes are carried out in an efficient and timely manner, while upholding quality standards. 6. Supervise, train, review, promote, discipline and provide feedback to human resources regarding staff issues. 7. Ensure preventative maintenance

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	6. Maintain accurate report and prototype production. 7. Comply with and enforce company rules of conduct and safety. 8. Communicate with other supervisors and departments.	7. Ensure preventative maintenance carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure 8. Utilise available personnel to meet the needs of the production schedule 9. Maintain accurate cutting report and material preparation production. 10. Comply with and enforce company rules of conduct and safety.	carried out and ensure repairs are done in an accurate and timely manner according to company maintenance procedure. 8. Communicate any issues or delays in material to impacted areas with corrective action plans and timings for resolution. 9. Plan labour effectively against weekly requirements to increase worker efficiency and minimise overtime.
LEVEL 2	Prototype Maker 1. Create prototype using variety of methods including computer aided design and traditional drafting method 2. Work closely with designer to understand their vision and transfer their vision into workable prototype. 3. Perform all processes within quality	Material Preparation Line Leader 1. Operate and maintain all cutting equipment, shear, knives and saws 2. Ensure all cutting operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to material preparation production operator to meet production	Assembly Line Leader 1. Operate and maintain all assembly equipment. 2. Ensure all assembly operation are completed accurately and efficiently 3. Enforce company policies and safety regulations. 4. Assign duties to assembly operator

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	specifications while visually monitoring the machine / equipment used to ensure proper function. 4. Ability to rotate through the assembly line, performing all prototype making operations. 5. Perform on-line and in-process visual inspection of pattern making to ensure it meets specifications per work order and procedure instructions. 6. Operate equipment above reasonable expectancy levels. 7. Adhere to safety and quality standards. 8. Troubleshoot problem and make adjustment as needed 9. Communicate with production staff to ensure that prototype is accurate and can be easily followed. 10. Perform other related pattern making tasks, as required. 11. Stay up-to-date with the latest trend	requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety issues in a timely manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with supervisor and other line leaders and departments to share information. 11. Maintain a clean and safe work environment.	to meet production requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required. 7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety issues in a timely manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with supervisor and other line leaders and departments to share information. 11. Maintain a clean and safe work environment.

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
AREA LEVEL	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
	and technology to ensure that prototypes are produced in efficient and timely manner.		
LEVEL 1	Assistant Prototype Maker 1. Assist the prototype maker in the creation of footwear and accessories prototype 2. Work with designer to understand and create 2D pattern. 3. Grade pattern for different sizes 4. Maintain pattern files. 5. Create technical packs for production. 6. Ensure effective and safe use of equipment and materials to fabricate components, prototypes, fixtures, etc. from verbal instructions, 2D sketch/drawing, and/or 3D solid model. 7. Ability to read and interpret drawings and files.	Material Preparation Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications 3. Select and install cutting dies in machines 4. Position and clamp work pieces on table or in chucks. 5. Ability to rotate through the assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual inspection of material preparation to ensure it meets specifications per work order and procedure instructions.	Assembly Operator 1. Perform all processes within quality specifications while visually monitoring the machine / equipment used to ensure proper function. 2. Read and interpret blueprint, drawing and specifications. 3. Control and troubleshoot automated machine adjusting speed and feed, monitoring temperature, and finish material specification per set standard. 4. Perform any light maintenance that is needed on assigned machine and communicate any major issues to supervisor/lead 5. Ability to rotate through the

	OCCUPATIONAL RESPONSIBILITY (OR)		
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS		
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR		
	MANUFACTURE OF RUBBER FOOTWEAR		
LEVEL \ AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)
		7. Assist Team Leader and Technicians with product and/or machine change-overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Reject product that are off specifications. 11. Adhere to safety and quality standards. 12. Perform other related material preparation tasks, as required.	- assembly line, performing all material preparation operations. 6. Perform on-line and in-process visual inspection of material preparation to ensure it meets specifications per work order and procedure instructions. 7. Assist Team Leader and Technicians with product and/or machine change-overs. 8. Operate equipment above reasonable expectancy levels. 9. Ensure product assembled meets quality standards. 10. Adhere to safety and quality standards. 11. Perform other related assembly tasks, as required.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF RUBBER FOOTWEAR	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT
LEVEL 7	NJT	NJT
LEVEL 6	NJT	NJT
LEVEL 5	Quality Control Manager 1. Resolve production issue and troubleshoot problems. 2. Maintain safe and orderly work environment. 3. Prepare and maintain accurate report. 4. Develop and implement a quality production program to ensure conformity of purchase material and final products to quality standards. 5. Maintain a high level of customer service by investigating and correcting issues and complaints relating to quality. 6. Analyse statistical data and product specifications to determine standards that meet quality and reliability expectancy of finished products.	NJT

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF RUBBER FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	7. Revise and update the quality control manual to incorporate statistical control programs. 8. Communicate with other departments. 9. Work closely with vendors, customers, quality representatives, and company personnel to maximise product reliability and minimise costs. 10. Develop and maintain a supplier quality index, utilising statistical control programs. 11. Prepare for and represent the company during all audits and meetings. 12. Prepare all necessary reports as required by customers and staff personnel. 13. Design, develop, and implement quality control training programs for all quality control staff. 14. Manage and supervise quality control department to ensure high productivity and product integrity throughout the production cycle.	
LEVEL 4	Quality Control Executive 1. Responsible for quality assurance for production involving all products and processes. 2. Execute the quality management strategy and plans,	Finishing Executive 1. Evaluate manufacturing processes by designing and conducting research programs; applying knowledge of product design, fabrication, assembly, tooling, and

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF RUBBER FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	including resources, systems, timescales, financials, to support, contribute to, and integrate within the organisation's annual business plan and long-term strategy. - Promote quality achievement and performance improvement throughout the organisation. - Set quality assurance compliance objectives and ensuring that targets are achieved. - Determine relevant quality-related training needs. - Maintain accurate and detail inspection record - Ensuring compliance with safety and health guidelines. - Maintaining and calibrating inspection equipment.	materials; conferring with equipment vendors; soliciting observations from operators. - Develop manufacturing processes by studying product requirements; researching, designing, modifying, testing and manufacturing methods and equipment; conferring with equipment vendors. - Improve manufacturing efficiency by analysing and planning work flow, space requirements, and equipment layout. - Provide manufacturing decision-making information by calculating production, labour, and material costs; reviewing production schedules; estimating future requirements. - Prepare product and process reports by collecting, analysing, and summarising information and trends.
LEVEL 3	Quality Control Supervisor - Inspect footwear product and parts to ensure quality standards. - Analyse the material, component or model using relevant quality criteria. - Identify and report defects in product.	Finishing Supervisor - Able to identify characteristics, components, advantages and limitations of a wide range of materials used in footwear production. - Supervise the work of finishing line leaders - Oversee the daily operation of a finishing section including

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF RUBBER FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	4. Notify operator of defects and request corrective action. 5. Maintain record of product inspection. 6. Participate in quality control meetings and reviews. 7. Train and develop production QC inspectors. 8. Resolve production QC issues and troubleshoot problems. 9. Maintain safe and orderly work environment. 10. Prepare report on production QC activities.	scheduling, monitoring and ensuring quality control 4. Resolve issue and trouble shoot problems in finishing section 5. Complete daily production reports and tally sheets and maintain weekly time reports. 6. Comply with and enforce company rules of conduct and safety. 7. Communicate with other supervisors and departments. 8. Improves methods and processes to increase productivity and quality while reducing costs. 9. Maintain safe and orderly work environment.
LEVEL 2	Quality Control Inspector 1. Perform final inspection by following documented work instructions. 2. Compare the material and other components received from the suppliers, or the final product, to standards. 3. Identify and report product defect. 4. Maintain accurate and detail inspection record. 5. Monitoring compliance with quality standard. 6. Assist in problem identification and resolution. 7. Conduct sample testing to validate product quality.	Finishing Line Leader 1. Monitor the individual components used for pack-out and replenish as needed to ensure steady flow of production. 2. Verify that proper labels and any requirements for the particular job are being adhered to. 3. Enforce company policies and safety regulations. 4. Assign duties to finishing production operator to meet production requirements. 5. Ensure that employees receive appropriate training. 6. Maintain production records as required.

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF RUBBER FOOTWEAR	
LEVEL \ AREA	(QUALITY CONTROL)	(FINISHING)
	8. Communicate effectively with stakeholders regarding quality requirements. 9. Maintain and calibrating quality inspection equipment.	7. Maintain accurate attendance information and authorise work schedules for payroll purposes. 8. Identify and address safety and quality issues in a timely manner. 9. Lead shift meetings and communicate information to employees. 10. Communicate with other supervisors and departments to share information. 11. Meet production quota and deadline.
LEVEL 1	NJT	Finishing Operator 1. Perform conditioning process according to approved procedure with standard tools. 2. Perform stacking process according to approved procedure with standard tools. 3. Perform buffing process according to approved procedure with standard tools. 4. Perform trimming process according to approved procedure with standard tools. 5. Perform oiling process according to approved procedure with standard tools. 6. Perform spraying process according to approved procedure

	OCCUPATIONAL RESPONSIBILITY (OR)	
MSIC DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS	
MSIC GROUP	(152) MANUFACTURE OF FOOTWEAR	
	MANUFACTURE OF RUBBER FOOTWEAR	
AREA LEVEL	(QUALITY CONTROL)	(FINISHING)
		with standard tools. 7. Perform polishing process according to approved procedure with standard tools. 8. Perform surface coating process according to approved procedure with standard tools. 9. Perform all processes within quality specifications while visually monitoring the machine/equipment used to ensure proper function. 10. Perform on-line and in-process visual inspection of finishing to ensure it meets specifications per work order and procedure instructions. 11. Assist Team Leader and Technicians with product and/or machine change-overs. 12. Operate equipment above reasonable expectancy levels. 13. Adhere to safety and quality standards. 14. Inspect finish product for defect and make necessary repair.

4.6 Occupational Description (OD)

Occupational Descriptions (OD) provide the summary of the primary responsibilities, job level, and outlining both the general and specific competency set such as knowledge, skills and attributes particular to the job. In an OF, the OD is only produced for critical job titles. As a result, the expert panel agreed that there are no critical job titles in the Manufacturing of Leather and Related Products industry as discussed in the next section.

4.7 Jobs in Demand and Critical Jobs

This section provides information on the jobs in demand and the critical jobs in the Manufacture of Leather and Related Products sector. Jobs in demand are jobs that are required and important for the main operations but hardly filled. This means the demand of the job title exceed the supply. Meanwhile, the critical jobs are jobs in demand and highly sought after but hard to fill due to the nature of the job which require certain skills set or experience. It is also considered as the strategic occupation of the industry that is critical to the success of the business.

The jobs are divided into three (3) categories of worker skills; namely low-skilled worker (LS), semi-skilled worker (SS) and skilled-worker (S). Based on the DSD eight (8) levels of qualification are identified which is level 1 (low-skilled worker), level 2 and 3 (semi-skilled worker) and level 4 until 8 (skilled-worker). The jobs in demand based on the category of workers and the corresponding critical jobs for the C15 sector are listed in Table 4.22 below.

Table 4.22: Jobs in Demand and Critical Jobs

No.	Category of Worker Skills	Jobs in Demand	Critical Jobs
1.	Skilled Worker (Level 4-8)	NJT	NJT
2.	Semi-Skilled Worker (Level 2-3)	• Pre – Tanning Supervisor • Pre – Tanning Line Leader • Tanning Supervisor • Tanning Line Leader • Finishing Supervisor • Finishing Line Leader	NJT
3.	Low Skilled Workers	• Material Preparation Operator • Assembly Operator	NJT

	(Level 1)	• Cutting Operator • Sewing Operator • Lasting Operator • Marking & Cutting Operator	
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4.8 Competencies in Demand

Competencies in demand are skills, knowledge, and attitudes that are in high demand in the employment market. These are the attributes that companies seek in candidates and that are essential to fulfil the activities of a certain job. The skills in demand vary according to industry, geography, and the overall condition of the employment market. Job skills in demand are always evolving to reflect the world's fast changes. Others become outdated as new talents become more useful. This section covered a skill that is now in great demand in the Manufacture of Leather and Related Products sector. Competency in demand is a person's necessary or additional capacity to accomplish their work requirements and duties in accordance with industry requirements. This covers the information, abilities, and attributes needed to do the job.

Knowledge is defined as the understanding of an information that acquired through education or experience that could be benefited to perform a task. The ability to perform specific tasks or activities in an efficient and competent manner is referred to as skills. While for attitude, it is related to the quality or characteristic of that is important to the task. The competencies in demand under the Manufacture of Leather and Related Products sector were discussed and identified during the FGD and are elaborated as in Table 4.23.

Table 4.23: Competency Set Description for C15

COMPETENCY IN DEMAND	DESCRIPTION
KNOWLEDGE	
Supply Chain Management	Understanding of supply chain processes, from raw material procurement to product distribution. Logistics and inventory management skills to optimise production efficiency.
Environmental and Sustainability Knowledge	Awareness of environmental regulations and sustainability practices in the leather industry. Implementation of eco-friendly manufacturing processes.

COMPETENCY IN DEMAND	DESCRIPTION
Research and Development	Ability to innovate and improve existing products or processes. Stay updated on new technologies and trends in leather and related industries
Compliance and Regulatory Knowledge	Stay informed about local and international regulations related to the leather industry. Ensure that manufacturing processes comply with legal and safety standards.
SKILLS	
Creative	Ability to come up with new and fresh ideas and design following the updated fashion trend
Innovative	Abilities and qualities to generate new ideas, create novel solutions, and contribute to the development and implementation of innovative processes or products.
Critical Thinking	Able to practice critical thinking through careful and systematic evaluation of information, arguments, and evidence in order to make informed decisions and solve problems.
Problem Solving	Ability to define a problem, gathering information, generating potential solutions, evaluating the solutions, and implementing the chosen solution.
Agile Mindset	Ability to practice a thought process that involves understanding, collaborating, learning, and staying flexible to achieve high performing results.
Leadership	Ability to influence and motivate others to achieve common goals by setting a direction, inspiring and motivating others to follow, and creating an environment that supports and encourages success.
Time management	Able to plan and organise the time allocation efficiently and effectively towards the accomplishment of specific tasks, goals and objectives.
Aptitude for Technology and Equipment	Able to understand how technologies and equipment operate, while easily learn and adapt to a new or future technology and equipment.
Communication	Ability to communicate effectively and efficiently either verbally or

COMPETENCY IN DEMAND	DESCRIPTION
and Reporting Skills	through report writing.
ATTRIBUTE / ATTITUDE	
Attention to detail	Able to focus on the smaller, finer points of a task or project, and to ensure that every aspect has been considered and executed correctly to a high standard.
Teamwork	Able and willing to collaborate and cooperate between individuals in working together towards completing a goal.
Multi-tasking / Flexibility	Able to handle multiple tasks, responsibilities, or projects simultaneously.
Dependability	Dependable, reliable and consistent in completing the task and responsibilities.
Work Ethic	Able to commit to working hard, being productive, and striving for excellence in completing a goal.
Professionalism	A competent, knowledgeable, and skilled in their work in completing a task.
Self-management / Independent	Able to manage emotions, thoughts, behaviours, and time in order to achieve their personal and professional goals.

The competencies listed in the table above are the skills in demand and important to all job in the sector regardless of the level and job titles. However, the level of importance may differ following the specific functional job responsibilities.

4.9 Job Relevant to Technology and Industrial Revolution

It is clear from the focus groups that the sector will not be able to rely primarily on technology. It will continue to rely on the creativity and innovativeness of its employees to produce new and fresh ideas and designs. Companies would most likely just deploy some of the core parts of technology, such as autonomous robots and the internet of things.

The Ministry of International Trade and Industry (MITI) identifies nine (9) critical industrial revolution pillars as described in Chapter 2. However, only two (2) pillars are influencing the job

landscape in some way. Table 4.24 illustrates the two (2) pillars, their elements, and job titles related to the Manufacture of Leather and Related Products sector.

Table 4.24: Pillars and Elements of Technology & Industrial Revolution Relevant to Manufacture of Leather and Related Products Sector

No	Pillars of Technology and Industrial Revolution	Technology Elements	Job Titles Related to Technology and Industrial Revolution
1	Autonomous Robot	- Automated Cutting Machines - Robotic assembly	- Material Preparation Operator - Assembly Operator - Cutting Operator - Sewing Operator - Lasting Operator
2	Advanced Materials and Sustainable Practices	- Environmentally Friendly Tanning Processes - Recycling Technologies - Smart Materials - Nanotechnology	- Prototype Maker - Assistant Prototype Maker - Production Quality Control Supervisor - Production Quality Control Inspector - Material Preparation Supervisor
3	Augmented Reality (AR) and Virtual Reality (VR)	- Product Design - Visualisation - Training and Simulation	- Assembly Supervisor - Cutting Supervisor - Sewing Supervisor - Lasting Supervisor - Material Preparation Supervisor - Production Quality Control Supervisor
4	3D Printing	- Prototyping - Customisation	- Prototype Maker - Assistant Prototype Maker
5	Internet of Things (IoT)	- Smart Manufacturing - Supply Chain Optimisation	- Assembly Line Leader - Cutting Line Leader - Sewing Line Leader - Lasting Line Leader - Material Preparation Line Leader

4.10 Emerging Skills

Emerging skills are defined as skills that are predicted to be critical to the industry in the near future based on recent developments, trends, government policy, or research, such as the technology revolution, sustainability issues, and many others. Table 4.25 presents the emerging skills identified as having a significant impact on the future of the Manufacture of Leather and Related Products sector, as well as the reasons that lead to the requirement of such skills.

Table 4.25: Emerging Skills and Requirements

No	Emerging Skills	Reason for Requirement
1	Digital Literacy	Understanding and working with digital tools and software are becoming essential. This includes using computer-aided design (CAD) software for pattern making, inventory management systems, and other digital platforms to enhance overall efficiency.
2	Sustainable Practices Knowledge	As sustainability becomes a growing concern, knowledge of eco-friendly practices, waste reduction techniques, and the use of sustainable materials is increasingly important in the leather industry.
3	Materials Science and Engineering	A deeper understanding of the properties and characteristics of different materials, including advanced synthetic materials, can contribute to the development of innovative and high-performance leather products.
4	Advanced Manufacturing Technologies	Knowledge of advanced manufacturing technologies, such as laser cutting and automated

		stitching, can improve precision and efficiency in the production process.
5	Customer Experience Design	Understanding customer needs and preferences and incorporating them into the design and manufacturing process. This includes creating products that align with consumer trends and values.
6	Regulatory Compliance Expertise	Keeping up-to-date with regulations related to environmental standards, product safety, and other compliance requirements is crucial for manufacturing in a global market.

4.11 Issues and Challenges Related to Manufacture of Leather and Related Products Sector

This section explores the common issues surrounding the Manufacture of Leather and Related Products sector. Feedback from the FGDs is summarised below:

1. Environmental Impact

Leather production is associated with significant environmental concerns, including water pollution, chemical usage, and deforestation. Sustainable and environmentally friendly practices are increasingly important to address these issues.

2. Supply Chain Complexity

The leather industry often involves complex supply chains with multiple stakeholders. Ensuring transparency, ethical sourcing of raw materials, and compliance with environmental and labour standards throughout the supply chain can be challenging

3. Market Demand and Trends (ESG)

The industry needs to adapt to changing consumer preferences and market trends. This includes staying abreast of fashion trends, shifts toward sustainable and cruelty-free products, and responding to changing customer expectations.

4. *Global Competition*

The leather industry faces intense global competition, particularly from countries with lower production costs. Manufacturers need to find ways to remain competitive while maintaining quality standards.

5. *Rising Raw Material Costs*

Fluctuations in the prices of raw materials, such as hides and skins, can impact production costs. Manufacturers need strategies to mitigate the effects of these fluctuations in their bottom line.

6. *Regulatory Compliance*

The leather industry is subject to various regulations related to environmental impact, chemical usage, and product safety. Staying compliant with these regulations, which may vary across regions, can be complex.

7. *Waste Management*

Leather production generates significant amounts of waste, including chemicals and by-products. Proper waste management is crucial to minimise the environmental impact and comply with regulations.

8. *Access to Skilled Labour*

Skilled labour is vital for producing high-quality leather goods. Finding and retaining skilled workers, particularly in regions with a shrinking pool of traditional craftsmen, can be a challenge.

4.12 Mapping to NOSS

Occupational Structure to available NOSS is shown in Table 4.26.

Table 4.26: Occupational Structure to available NOSS

DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS				
GROUP	(151) TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS DRESSING AND DYEING OF FUR				
	MANUFACTURE OF LUGGAGE, HANDBAGS AND THE LIKE, SADDLERY AND HARNESS				
AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(ASSEMBLY)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Prototype Manager	NJT	NJT	Quality Control Manager	NJT
LEVEL 4	Prototype Maker Executive	Production Executive	Production Executive	Quality Control Executive	Production Executive
LEVEL 3	Prototype Maker Supervisor	Material Preparation Supervisor	Assembly Supervisor	Production Quality Control Supervisor	Finishing Supervisor Leather Bag Making SS-300-3:2012 (18-12-2012)
LEVEL 2	Prototype Maker	Material Preparation Line Leader	Assembly Line Leader	Production Quality Control Inspector	Finishing Line Leader Leather Bag Making SS-300-2:2012 (18-12-2012)
LEVEL 1	Assistant Prototype Maker	Material Preparation Operator	Assembly Operator	NJT	Finishing Operator Leather Bag Making SS-300-1:2012 (18-12-2012)

NJT – No Job Title

DIVISION	(15) MANUFACTURE OF LEATHER AND RELATED PRODUCTS					
GROUP	(152) MANUFACTURE OF FOOTWEAR					
	MANUFACTURE OF LEATHER FOOTWEAR					
AREA	(PROTOTYPE MAKING)	(MATERIAL PREPARATION)	(SEWING)	(LASTING)	(QUALITY CONTROL)	(FINISHING)
LEVEL 8	NJT	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Prototype Manager	NJT	NJT	NJT	Quality Control Manager	NJT
LEVEL 4	Prototype Maker Executive	Production Executive	Production Executive	Production Executive	Quality Control Executive	Production Executive
LEVEL 3	Prototype Maker Supervisor	Cutting Supervisor**	Sewing Supervisor**	Lasting Supervisor**	Production Quality Control Supervisor**	Finishing Supervisor SS-301-3:2012 Leather Footwear Making (18-12-2012)
LEVEL 2	Prototype Maker**	Cutting Line Leader**	Sewing Line Leader**	Lasting Line Leader**	Production Quality Control Inspector**	Finishing Line Leader SS-301-2:2012 Leather Footwear Making (18-12-2012)
LEVEL 1	Assistant Prototype Maker*	Cutting Operator**	Sewing Operator**	Lasting Operator**	NJT	Finishing Operator SS-301-1:2012 Leather Footwear Making (18-12-2012)

NJT – No Job Title

4.13 Conclusion

This chapter discussed the research findings based on document review, interview, observations as well as discussions with the industry representatives via Focus Group Discussions (FGD). Among the major delivery of the findings include the identification of the Occupational Structure (OS) and Occupational Responsibilities (OR) for the Manufacture of Leather and Related Products sector. The OS and OR not only provide information on the occupation competency, job areas applicable, and skill level based on MOSQF level descriptors, but they also reflect the possible career paths within the C15 sector. The jobs and skills in demand and the specific steps proposed to be taken by various parties to bridge the skills gaps within the industry are also elaborated so that the stakeholders concerned could take the necessary steps to overcome such challenges. The next and final chapter 5 will further explain the discussions, recommendations and conclusion based on the overall findings of this OF.

CHAPTER V

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.1 Discussion

This chapter provides an insight into the discussion of the findings obtained throughout the development of the Occupational Framework for the Manufacture of Leather and Related Products sector. Overall, there are 24 job areas identified under the Division C15 of MSIC 2008. In summary, there are 97 job titles, and 45 job titles are relevant to the latest technology. Mapping of Occupational Structure (OS) to the available National Occupational Skills Standard (NOSS) is also presented. To date, there have been six (6) NOSS developed for the Manufacture of Leather and Related Products sector.

The research has accomplished all the research objectives as discussed thoroughly in Chapter 4 and to be concluded in this chapter.

5.1.1 *Objective 1: Relevance of Occupational Framework (OF)*

To identify the relevancy of previous research with the current and future needs of the industry.

Based on document analysis and a benchmarking visit to Garut's leather area, it is possible to conclude that the Manufacture of Leather and Related Products sector requires additional research to ensure its sustainability and improve its contribution to the country's economy.

5.1.2 *Objective 2: Occupational Structure (OS)*

To identify job areas, job titles and relevant competency level to establish Occupational Structure (OS) for the manufacture of leather and related products sector.

The findings revealed for C151, a total of 8 job areas and C152 there are 16 job areas, with overall 97 job titles identified through face-to-face interview sessions with the industry representatives

and validated through Focus Group Discussions (FGD). In the OS, the job titles are marked if they are either a critical job or a job relevant to the technology development or both. The completed OS is presented in Table 4.2, 4.5, 4.8, 4.11 and 4.14 in chapter 4 above.

5.1.3 Objective 3: Occupational Responsibilities (OR)

To determine Occupational Responsibilities (OR) that outline the main work activities and tasks for each job title.

The OR describes the main duties of each of the job titles listed under the OS, which also corresponds with the particular job's respective area and level. The OR will serve as the future reference for the development of the NOSS for the Manufacture of Leather and Related Products occupation under the MSIC 2008, Division C15. The OR can be referred to in Table 4.17 to Table 4.21 in chapter 4 above.

5.1.4 Objective 4: Occupational Descriptions (OD) for Critical Jobs

To identify Critical Jobs titles and establish the Occupational Descriptions (OD) for each critical job title for the manufacture of leather and related products sector.

Based on the FGD, there is no critical job for the Manufacture of Leather and Related Products sector.

5.1.5 Objective 5: Competency in Demand, Job Relevant to industry & technological revolution and Emerging Skills

To analyse the Competency in Demand, jobs relevant to the industry and technological revolution, as well as emerging skills.

Through the FGD and analysis of relevant documents, the skills in demand for the industry are divided into three (3) as follows:

Knowledge	Skill	Attribute
Project Management	Visualisation	Attention to detail

Resource Management	Sketching	Creative
Material Grading and Quality	Problem Solving	Cooperative
Quality Management	Communication	Innovative
Fashion Trend	Designing	Multi-tasking
Sustainable Awareness	Learning Agility	Social orientation
Smart Manufacturing	Critical Thinking	Team work
Technology Proficiency	Automation Skill	Work ethic

The set of competencies listed above is particularly relevant and imperative to the nature of the job in this industry. However, the level of importance and relevance of each element varies based on the occupational level and job titles. Also, the competencies are additional to the functional competencies required for a particular job title.

According to the FGD, the industrial and technology revolution has less impact on the sector. The industry is heavily reliant on manpower because most of the processes are done manually especially in our country. Even though some of the processes utilises machines, the manning of the machines is still labour intensive.

The following Figure 14 is the elements of technology relevant to the occupation under C151 and C152:

Elements of Technology Relevant to the Occupation in C151 and C152

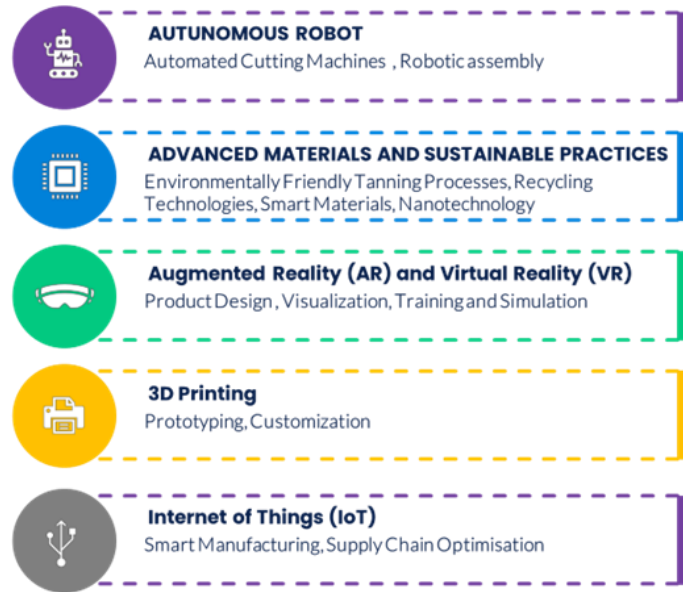


Figure 14: Elements of Technology Relevant to the Sector

In terms of emerging skills, it has been discovered that the manufacturing of leather and related products is exploring the possibility of being automated in some of the processes that are currently operating manually, particularly through the use of artificial intelligence and robotics. However, these demand huge investment in which not many of the manufacturers, especially the SMEs, could afford.

5.2 Recommendations

5.2.1 Usefulness of OF

The outcome of this OF will be used as a reference for future plans of developing skilled personnel and certifying Malaysians in this sector in order to improve the quality of the local sector and thus boost Malaysia's global competitiveness. When it comes to addressing or mitigating workforce demand and supply, there are several options. It may include establishing and maintaining partnerships with other agencies or departments, as well as educational institutions, in order to increase external talent pools, as well as training existing staff to meet new skill requirements.

Based on the above comments, specific recommendations are listed below:

- a) To continue and streamline NOSS development efforts for sectors in accordance with the findings of this analysis. This includes the creation of NOSS for sectors and sub-sectors that are in high demand but have yet to be developed. Only six (6) NOSS are currently available, as indicated by the mapping of OF to NOSS.
- b) To compliment Malaysia Standard Classification of Occupation (MASCO) with the additional job titles in the Manufacture of Leather and Related Products;
- c) To continuously promote the use of this OF by industry players in order to effectively improve the career structure of their employees. Following the identification of the critical job titles, it is found that the job titles as “Operator” and “Line Leader ” are in demand and short in supply due to lack of interest of the local labour to work in the manufacturing environment. In some cases, the manufacturers have to close some of the sections or outsource the process because they are unable to find workers to fill up the job. Therefore, it is suggested that companies refer to the OF in designing a clear career path and in coming up with an attractive compensation package for the employees.

5.2.2 Job creation opportunity

In a different light, this report acknowledges the enormous potential for job creation in leather product manufacturing. Beyond the sumptuous attractiveness of leather goods, this business has the ability to create large job opportunities, so contributing to economic growth and development. Leather product manufacturing requires several steps, each of which provides employment prospects. The voyage begins with the acquisition of raw materials, mostly animal hides. This period brings together farmers, hunters, and traders, producing occupations in both rural and urban locations. Skilled labour, such as tanners, dyers, and quality control experts, is necessary while the leather goes through tanning, curing, and finishing procedures.

Furthermore, leather product manufacture is not merely a mechanical process; it is an art form requiring experienced artisans. From design and cutting to stitching and finishing, each stage demands precision and competence. Governments and corporations may cultivate a new generation of skilled craftsmen by investing in training programmes and workshops, which stimulate creativity and preserve traditional skills. Leather's adaptability extends beyond

traditional applications to a diverse range of products, including footwear, outerwear, accessories, and upholstery. Diversifying leather goods not only meets consumer demand, but also creates new work opportunities. Designers, pattern makers, and marketing specialists all play important roles throughout this era, contributing to a dynamic and ever-changing sector.

In recent years, there has been an increased emphasis on sustainable practices in the leather business. The use of environmentally friendly tanning procedures, careful raw material procurement, and recycling activities all help to maintain the industry's positive image. Furthermore, the demand for ethically manufactured leather goods has provided opportunities for sustainability professionals, expanding the scope of job development.

The leather product market transcends local boundaries and is a worldwide phenomenon. As customer preferences alter and worldwide trade expands, the need for high-quality leather goods grows. This global market dynamic creates chances for export-oriented enterprises, necessitating the expertise of logistics, international trade, and marketing specialists to bridge the gap between manufacturers and consumers throughout the globe.

In conclusion, leather product production represents a beacon of possibility in terms of job generation. Governments and businesses can unleash the full economic potential of leather manufacturing by encouraging innovation, investing in education and training, and embracing sustainability, resulting in a robust and thriving sector that contributes to job creation and economic development. As we traverse the difficulties of the global economy, the leather industry is set to make an indelible impression on the landscape of job creation.

5.2.3 Research and Development opportunity

Research and development (R&D) play a crucial role in advancing any industry, and the leather product manufacturing sector is no exception. By investing in innovation, the industry can enhance product quality, explore new applications, and address environmental concerns. Here are some promising research and development opportunities for leather product manufacturing:

a) Alternative tanning methods

Traditional tanning techniques frequently employ chemicals that can have an impact on the environment. Research into alternative tanning procedures, like as vegetable tanning or

enzyme-based bio-tanning, can lead to more sustainable and environmentally friendly practices. This not only meets consumer demand for ethically made goods, but it also reduces the environmental impact of leather production.

b) Biodegradable leather

Biotechnology advancements enable the development of biodegradable leather replacements. Researchers are looking into ways to create leather-like polymers from plant-based sources or even lab-grown proteins. This could resolve concerns about the usage of animal hides and help to develop environmentally friendly, cruelty-free alternatives.

c) Smart Leather Products

Integrating technology into leather products creates new possibilities. Smart leather with embedded sensors or conductive materials can be developed for use in wearable technology, automobile interiors, and medical devices. This breakthrough could lead to the creation of high-tech leather items with improved functionality.

d) Recycling and Circular Economy

Research into leather waste recycling methods and the establishment of a circular economy within the sector have the potential to drastically reduce environmental effect. This includes developing strategies for recycling used leather products, producing recycled leather resources, and constructing effective waste leather collection and processing systems.

e) Nanotechnology applications

The use of nanotechnology in leather manufacture can produce products with improved characteristics. Researchers can investigate nanomaterials for increased water resistance, stain resistance, and durability. This not only improves the quality of leather products, but also helps to design high-performance materials for a variety of industries.

f) Customisation and Personalisation

Consumers' preferences are shifting towards personalised and distinctive products. R&D efforts might be directed towards developing technologies that allow for the customisation of leather items. This might include developments in digital printing, laser engraving, or 3D printing processes applied to leather, offering customers with unique things.

g) Digital platforms for design collaboration

Collaboration among designers, manufacturers, and customers is critical to innovation. Research can look at the creation of digital platforms that enable real-time collaboration in the design process. Virtual prototyping, cloud-based design tools, and digital platforms that connect designers with manufacturers could all help to shorten the product development cycle.

h) Eco-friendly finishing processes.

The finishing process in leather manufacture frequently uses chemicals that are hazardous to the environment. Research might be directed towards the development of environmentally friendly finishing technologies, such as water-based or solvent-free solutions. This not only addresses environmental concerns, but also reflects the industry's growing desire for sustainable and green operations.

To summarise, research and development opportunities in leather product manufacturing are numerous and cover many facets of the industry. By embracing innovation, the sector can handle current difficulties while also staying ahead of consumer trends and contributing to a more sustainable and technologically sophisticated future. Collaboration among industrial players, academic institutions, and government authorities is critical for realising the full potential of these opportunities.

5.2.4 *Government Support*

Government support for the development of manufacturing of leather and related products is pivotal and can take various forms. The following are some common ways in which governments may support this sector:

- a) Governments may provide direct financial support to leather goods manufacturers through grants or subsidies to help them offset production costs, invest in technology, or improve product quality.
- b) Offering low-interest loans can facilitate access to capital for small and medium-sized enterprises (SMEs) in the leather goods industry.
- c) Governments may allocate funds to support research and development activities in the leather industry. This can include developing new materials, improving manufacturing processes, and creating innovative designs.
- d) Governments may encourage collaboration between industry players and research institutions to foster innovation and knowledge transfer.
- e) Governments can invest in programs that provide training and skill development for workers in the leather goods manufacturing sector. This ensures a skilled workforce that meets industry demands.
- f) Developing vocational education programs tailored to the needs of the industry can enhance the skill set of individuals entering the workforce.
- g) Establishing industrial parks or clusters for leather goods manufacturing can provide businesses with shared infrastructure, reducing costs and encouraging collaboration.
- h) Improving transportation and logistics infrastructure can enhance the efficiency of supply chains for leather goods manufacturers.
- i) Governments may support leather goods manufacturers in accessing international markets through trade promotion initiatives, participation in trade fairs, and negotiating trade agreements.
- j) Supporting the branding and marketing efforts of local leather goods manufacturers can help them establish a strong presence in domestic and international markets through agencies such as Karyaneka and MOTAC.

- k) Governments can provide guidance and support for leather goods manufacturers to comply with environmental regulations and adopt sustainable practices.
- l) Offering incentives for adopting eco-friendly and sustainable manufacturing processes can encourage the industry to be more environmentally conscious.
- m) Developing policies that specifically address the needs and challenges of the leather goods manufacturing sector can create a conducive business environment.
- n) Ensuring transparent and predictable regulatory frameworks can provide stability for businesses and attract investment.

Governments play a crucial role in creating an enabling environment for the growth of the leather goods manufacturing sector, and a comprehensive approach that addresses various aspects of the industry is often most effective.

5.3 Limitation

As the sector involves individual creativity as the secret trade that provides them with the competitive advantage, many industry players are reluctant to share information. For example, during the observation visit, researchers are not allowed to take photographs in the factory vicinity. Data were mainly classified as ‘Private and Confidential’ by the participative companies was another limitation identified during the course of the research.

5.4 Conclusion

In conclusion, the Occupational Framework is a document that contains a) the Occupational Structure that indicates the job areas, job titles at different levels, classified following the Malaysia Occupational Standard Qualification Framework (MOSQF) Level Descriptors, and b) Occupational Descriptions (OD), c) Occupational Responsibilities (OR) and the Competency set. This document also highlights the job and competency in demand, critical jobs, emerging skills as well as jobs relevant to the industrial revolution. In addition, the challenges impacting the industry are also discussed. The findings are obtained through various research methods including document analysis, face-to-face interviews, FGD with the industry experts and non-participatory observation. The data were analysed through content analysis. The document will be the main reference in the development of the NOSS and in updating MASCO.

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ANNEX 1: TECHNOLOGY PILLARS

Pillars of 4th Industrial Revolution

No	Pillars of Industrial Revolution	Description
1.	Autonomous Robots	Autonomous robots can be deployed to handle repetitive and labour-intensive tasks in leather manufacturing, such as cutting leather pieces, stitching, gluing, or assembling components. By automating these processes, manufacturers can increase production efficiency, reduce human error, and optimise resource utilisation.
2.	Big Data Analysis	By analysing historical sales data, market trends, and customer preferences, manufacturers in the leather industry can use Big Data Analysis to predict demand more accurately. This helps in optimising production schedules, managing inventory levels, and reducing the risk of overstocking or stockouts.
3.	Cloud Computing	Cloud computing offers the leather and related products industry in Malaysia the potential to streamline operations, optimise costs, improve data-driven decision-making, and enhance their competitiveness in the market. However, it is essential for companies to assess their specific needs, choose reliable cloud service providers, and implement appropriate security measures to make the most of these cloud-based solutions.
4.	Internet of Things (IoT)	The Internet of Things (IoT) has the potential to revolutionise the manufacture of leather and related products industry in Malaysia by introducing smart, connected devices and systems. IoT enables physical objects to collect and exchange data over the

		internet, leading to increased automation, improved efficiency, and enhanced decision-making capabilities.
5.	Additive Manufacturing (3D printing)	Additive Manufacturing, commonly known as 3D printing, holds significant relevance and potential for the manufacture of leather and related products industry in Malaysia. By integrating 3D printing technology into various aspects of the manufacturing process, leather producers can benefit from numerous advantages. Some examples are prototyping and design iterations, customisation and personalisation and complex geometries and unique designs.
6.	System Integration	As the industry becomes more technologically advanced and complex, integrating different systems and processes becomes crucial to streamline operations, enhance efficiency, and improve overall productivity. By embracing system integrations, the leather and related products industry in Malaysia can achieve a more agile, data-driven, and competitive position in the market. Manufacturers can leverage the power of interconnected systems to optimise processes, reduce costs, and deliver high-quality products that meet the evolving demands of customers.
7.	Cyber-Security	Digital data, which includes designs, production schedules, and consumer information, is used more and more in manufacturing operations. Security measures that are effective in preventing data breaches guarantee the integrity and confidentiality of sensitive data. Global supply networks are common in the leather and allied goods sector. By ensuring that communication and data exchange between suppliers, manufacturers, and distributors stay safe, cybersecurity helps protect the digital backbone of

		these supply chains.
8.	Augmented Reality	With the aid of augmented reality (AR), workers may learn difficult jobs in a realistic, hands-on setting. This is especially useful in fields with complex processes, like the production of leather and associated goods, where expert workmanship is crucial. Technicians operating on machinery or equipment can get real-time visual overlays of instructions, schematics, or troubleshooting manuals. This lessens downtime and increases the precision of repairs.
9.	Simulation	Initiatives for continuous improvement like Lean and Six Sigma include simulation as a key component. It offers a platform for evaluating and putting into practise process improvements while also assessing how they affect key performance metrics. Overall, manufacturing simulation is a flexible tool that helps businesses run more efficiently, produce better products, spend less money, and make wiser decisions. It is essential for maintaining competitiveness in the fast-paced production environment of today.

ANNEX 2: LIST OF CONTRIBUTORS

**C15 – MANUFACTURE OF LEATHER AND RELATED PRODUCTS
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2024