



MSIC N81 : SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES

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Jabatan Pembangunan Kemahiran
Kementerian Sumber Manusia, Malaysia

*Department of Skills Development
Ministry of Human Resources, Malaysia*



OCCUPATIONAL FRAMEWORK

SECTION N: ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES

DIVISION 81: SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES

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ABSTRACT

The Services to Buildings and Landscape Activities (N81) is a significant contributor to the economy, requiring a skilled workforce to meet its demands. The aim of this research is to develop an Occupational Framework (OF) for N81. This framework will include three groups: Group 811 Combined Facilities Support Activities; Group 812 Cleaning Activities; and Group 813 Landscape Care and Maintenance Service Activities. The study utilized a Design and Development Research (DDR) approach, a comprehensive methodology which aims to develop a framework based on the analysis of the needs and is validated through three phases: information gathering; expert view; and framework verification. The research involved three data collections methods: document review, Focus Group Discussion (FGD) and in-depth interview. A total of 14 panel members participated in FGD 1, 13 panel members for FGD 2 and 8 for in-depth interview. The FGDs were conducted in two sessions, with the first session to understand the occupational structure (OS) and occupational responsibility (OR), and the second session focusing on jobs in demand, critical jobs and occupational descriptions (OD) for each jobs titles, and to finalising OS and OR. An in-depth interview with industry experts to identify the relationship between previous studies with current and future industrial needs, and discussion of the job titles knowledge, skills, and attributes (KSA) competency in demand were also conducted. This research employed content analysis method in analysing all the collected data to suit the exploratory nature of the research in developing OF. The study found that N81 is an important sector of the economy that is undergoing significant changes due to advancements in industrial revolution (IR) technology. A total of 20 total job areas and 92 job titles in the N81 sector across all three groups: N811 (4 job areas; 18 job titles), N812 (10 job areas; 52 job titles), and N813 (6 job areas; 22 job titles) established. The study determined OR and occupational descriptions (OD) for each 92 job titles to completer the N81 OF development. The study identified a total of 55 jobs in demand, 70 critical jobs and competencies needed to address demand and supply in industry. The OF that has been developed will serve as reference for the development of the National Occupational Skills Standard (NOSS) document and guide the development of curricula for universities and skills training institutes. The research provides valuable insights into the competency requirements of the workforce in this sector, offering a roadmap for the development of skills training programs and certification standards that will support the growth of this important sector.

ABSTRAK

Perkhidmatan Bangunan dan Aktiviti Landskap (N81) merupakan penyumbang penting kepada ekonomi, memerlukan tenaga kerja mahir untuk memenuhi permintaan. Matlamat penyelidikan ini adalah untuk membangunkan Kerangka Pekerjaan (OF) untuk N81. Rangka kerja ini akan merangkumi tiga kumpulan: Kumpulan 811 Combined Facilities Support Activities; Kumpulan 812 Cleaning Activities; dan Kumpulan 813 Landscape Care and Maintenance Service Activities. Kajian ini menggunakan pendekatan Design and Development Research (DDR), di mana metodologi komprehensif yang bertujuan untuk membangunkan kerangka berdasarkan analisis keperluan dan disahkan melalui tiga fasa: pengumpulan maklumat; pandangan pakar; dan pengesahan rangka kerja. Kajian ini melibatkan tiga kaedah pengumpulan data iaitu; semakan dokumen, Perbincangan Kumpulan Fokus (FGD) dan temuduga. Seramai 14 panel terlibat dalam FGD 1, 13 panel untuk FGD 2 dan 8 untuk temuduga. FGD dijalankan dalam dua sesi, dengan sesi pertama untuk memahami struktur pekerjaan (OS) dan tanggungjawab pekerjaan (OR) dan sesi kedua memfokuskan kepada pekerjaan dalam permintaan, pekerjaan kritikal dan deskripsi pekerjaan (OD) bagi setiap tajuk pekerjaan, dan untuk memuktamadkan OS dan OR. Temuduga bersama pakar industri bertujuan untuk mengenal pasti hubungan antara kajian terdahulu dengan keperluan industri semasa dan masa datang, dan membincangkan kompetensi pengetahuan, kemahiran dan sifat (KSA) jawatan pekerjaan. Penyelidikan ini menggunakan kaedah content analysis dalam menganalisis semua data dan bersesuaian dengan sifat penerokaan kajian OF ini. Dapatan kajian menjelaskan N81 merupakan sektor penting ekonomi yang mengalami perubahan ketara berikutan kemajuan dalam teknologi revolusi perindustrian. Sebanyak 20 bidang pekerjaan dan 92 jawatan dalam sektor N81 merentas ketiga-tiga kumpulan: N811 (4 bidang pekerjaan; 18 jawatan), N812 (10 bidang pekerjaan; 52 jawatan) dan N813 (6 bidang pekerjaan; 22 tajuk pekerjaan) telah dikenalpasti. Kajian ini turut menentukan OR dan occupational descriptions (OD) untuk setiap 92 jawatan dalam melengkapkan pembangunan OF N81. Kajian itu mengenal pasti sejumlah 55 pekerjaan dalam permintaan, 70 pekerjaan kritikal dan dapatan kecekapan yang diperlukan untuk menangani permintaan dan penawaran dalam industri. OF yang telah dibangunkan akan menjadi asas rujukan untuk pembangunan dokumen Standard Kemahiran Pekerjaan Kebangsaan (NOSS) dan panduan pembangunan kurikulum untuk universiti dan institut latihan kemahiran. Penyelidikan ini memberikan input yang bernilai terhadap keperluan kecekapan tenaga kerja, menawarkan pelan hala tuju untuk pembangunan program latihan kemahiran dan piawaian pensijilan yang akan menyokong pembangunan sektor penting ini

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ABBREVIATION

3R	Reduce, Reuse & Recycle
4D	Dirty, Difficult, Dangerous & Demeaning
ABM	Akademi Binaan Malaysia
AI	Artificial Intelligent
BAM	Board of Architects Malaysia
BCP	Business Continuity Plan
BEI	Building Energy Index
BEM	Board of Engineers Malaysia
BIM	Building Information Modelling
BQSM	Board of Quantity Surveyors Malaysia
C&S	Civil & Structure
CAFM	Computer aided Facility Management
CCD	Continuous Contractor Development
CIDB	Construction Industry Development Board
CIMP	Construction Industry Master Plan
CITP	Construction Industry Transformation Program
CLAB	Construction Labour Exchange Berhad
CP	Cleaner Production
CREAM	Construction Research Institute Malaysia
CreATE	Centre of Excellence of Technology and Engineering
CSP	Construction Strategic Plan
CU	Competency Unit
CV	Curriculum Vitae
DASN	Dasar Alam Sekitar Negara / National Environment Policy
DBKL	Dewan Bandaraya Kuala Lumpur
DCP	Dealing with Construction Permit
DDR	Design and Development Research
DOSM	Department of Statistics Malaysia
DSD	Department of Skills Development

DWNP	Department of Wildlife and National Parks Peninsular Malaysia
EMS	Energy Savings Measures
ESG	Environment, Social and Governance
FDPM	Forestry Department Peninsular Malaysia
FGD	Focus Group Discussion
FM	Facility Management
FMBOK	Facilities Management Book of Knowledge
FME	Facility Management Executive
FMM	Facility Management Managers
FMP	Financial Management Planning
FRIM	Forest Research Institute Malaysia
GDP	Gross Domestic Product
HRDF	Human Resources Development Fund
HSE	Health, Safety & Environment
IAQ	Indoor Air Quality
IBC	Institutional Biosafety Committee
IBS	Industrialized Building Systems
ICE	ILAM Centre of Excellence
ICT	Information Communication Technology
iDBKL	Institut Latihan Dewan Bandaraya Kuala Lumpur
IFLA	International Federation of Landscape Architects
IFMA	International Facility Management Association
I-KPKT	Housing and Local Government Training Institute
ILAM	Institute of Landscape Architect Malaysia
IoT	Internet of Things
IR	Industrial Revolution
ISIC	International Standard Industrial Classification
ISO	International Organization for Standardization
IUCN	International Union of Conservation of Nature
IWMS	Integrate Workplas Management System
JKPTG	Director General of Lands and Mines

KPI	Key Performance Indicator
KSA	Knowledge, Skills, and Attributes
LCC	Life Cycle Costing
LMOs	Living Modified Organisms
MACC	Malaysia Association of Cleaning Contractors
MAFM	Malaysian Association of Facility Management
MaPAL	Public Park Landscape Asset Maintenance
MAPMA	Malaysian Asset and Project Management Association
MASCO	Malaysia Standard Classification of Occupations
MFCA	Material Flow Cost Accounting
MHA	Ministry of Home Affairs
MIPFM	Malaysian Institute of Property & Facility Managers
MOA	Ministry of Agriculture & Agro-based Industry
MOSQF	Malaysia Occupational Skill Framework
MOW	Ministry of Works
MSCS	Malaysia Skills Competency Standards
MSIC	Malaysia Standard Industrial Classification
NAFAM	National Asset and Facility Management Convention
NCP	National Construction Policy
NFA	National Forestry Act
NLD	National Landscape Department
NOSS	National Occupational Skills Standard
NRE	Ministry of Natural Resource & Environment
O&M	Operation And Maintenance
OD	Occupational Descriptions
OF	Occupational Framework
OR	Occupational Responsibilities
OS	Occupational Structure
P&L	Profit And Loss
PBT	Pihak Berkuasa Tempatan
PHC	Plant Health Care

PLWS	Productivity Link Wage System
PMP	Project Management Plan
PPP	Public Private Partnership
PRF	Permanent Reserved Forests
PWD	Public Works Department
QLASSIC	Quality Assessment System in Construction
QMP	Quality Management Plan
QRAM	Quality Restroom Association Malaysia
SDG	Sustainable Design Goal
SEDA	Sustainable Energy Development Authority
SHE	Safety, Health & Environment
SKKP	Sijil Kecekapan Kemahiran Personel
SKM	Sijil Kemahiran Malaysia / Development Of Skill Training
SKP	Sijil Kecekapan Pengurusan
SLDN	National Dual Training System
SPAN	National Water Service Commission
SWCorp	Solid Waste Management and Public Cleaning Corporation
SWTC	Solid Waste Training Centre
TAMM	Total Asset Management Manual
TNA	Training Need Analysis
TVET	Technical and Vocational Education and Training
WIM	Written Instruction Materials
WLC	Whole Life Cost

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter is the introductory section of the Occupational Framework (OF) and includes a preview of the background context, the problem statement, objectives of the study, scope of study, significance of study, and the chronological arrangement of each chapter.

1.2 Research Background

The research intended to update the human resource related to the industry of support service activities mainly focusing on Division 81 which translated into Group 811 until 813. These groups will be explained in the subsequent subchapter. However, it is found encapsulated in Facility Management (FM) under Division 81 of Services to Buildings and Landscape Activities. Under this section there are 3 groups, namely Group 811 Combined Facilities Support Activities; Group 812 Cleaning Activities; And Group 813 Landscape Care and Maintenance Service Activities.

The growth of the administrative and support services activities in Division 81 has been indirectly recognised with the introduction of a strategic plan in Facility Management 2020 – 2025 within the intersection of People, Technology, Process and Place (CIDB, 2021; Arampatzi, E., & Burger, M. 2020). This strategic plan validated the need of the field within Division 81 to be revamped as Facility Managers (FM) are expected to be qualified and to have learned a broad range of management and leadership skills (Nazali Mohd Noor & Pitt 2009; Roper, & Payant, 2014). In addition, FM can incorporate both facility (technical) and management skills to function effectively (Steenhuizen et al, 2014). Each organisation depends on a combination of functions and services to provide critical support for its core operations. FM is also a multidisciplinary work that encompasses a wide variety of practices, roles and skills (Finch & Zhang, 2013). The current scope of FM is acting as an intermediary and combining agent on the demand and supply side of a facility in an enterprise.

According to Kamaruzzaman, & Zawawi, (2010), Isa et al (2016), and Miswan et al (2017), the 1980s a new and more holistic management specialty began to be developed focused on infrastructure, which gradually acknowledged the value of managing not only structures, but also people-related buildings, and incorporated them into the concepts of the management and development process. FM began in Malaysia in the 1990s with government funding. In 1996, three FM companies were privatized by the government in government hospitals, the biggest FM transaction in the government at the time. In 2007, the first National Asset and Facility Management Convention (NAFAM) was held in August to address the current issues and future challenges in managing national assets and facilities. This convention showed that the FM profession has evolved and adapted to meet the demands of a fast growing built and human environment industry. Agreeing to an annual NAFAM, the Prime Minister has urged both the public sector and private sector to come up with a more effective and efficient procedural framework in order to continuously improve the management of national assets and facilities. This convention was a major revolution to the future changes with regards to the perception of FM professions and practices in Malaysia.

1.3 Problem Statement

According to MSIC 2008 by Department of Skill Development, redeveloping the Division 81 requires a holistic and strategic understanding of problem statements related to FM which include 3 groups namely Group 811 Combined Facilities Support Activities; Group 812 Cleaning Activities; And Group 813 Landscape Care and Maintenance Service Activities. The problem statement of the research is the obscurity of the OF related to FM which represents Division 81. It is hoped that the development of the occupational framework of Division 81 would remedy some of the major problems facing FM.

Various problems highlighted directly related to Division 81 by CREAM, (2011) and CIDB (2020;2021) namely Five (5) issues have been brought up which included Recognition, Awareness, Financial, Human Capital, Performance Measurement,

Generally there are few factors that determine the success implementation of FM practices in Malaysia. Among the first obstacles to overcome is the recognition, especially from the policy makers within the government bodies (Kamaruzzaman, & Zawawi, 2010; Baaki et al, 2016). The government's involvement could be made possible in the following areas; monetary (if possible); providing incentives and/or awards for industry best practices; and encouraging expansion of knowledge through formal education programmes including technical competencies related to Division 81.

Second, the awareness issues of FM under Division 81 as the management of assets and FM are normally faced with issues and challenges related to top management direction and support, policy, organization structure, logistics, monitoring, reporting and data/ records keeping (Kamaruzzaman et al, 2018). Apart from this, there is also no proper monitoring body that is well equipped to guide and monitor the FM programme implementation (Ali et al, 2010). In fact, top management awareness and knowledge on FM is generally lacking. This lack of awareness and knowledge might be caused by a broken chain of information flow from the operational team to the management as well as unclear roles and responsibilities of the FM functions (Abd Jamil & Fathi, 2020).

Third, the issue related to Division 81 as the main area of concern for FM industry with regard to finance has always been related to financial model, capital, return-on-investment, life-cycle costing and value for money on the overall service delivery (Awang et al, 2017; Nafrizon et al, 2020). The typical problem claimed by most of the Facility Managers is that there is always insufficient budget provision for an efficient delivery of the defined scope of works. The top management is unable to appreciate the justifications presented by the technical team (Shah Ali, 2009). This creates other problems that will hamper the effort to perform better in delivering high value service to the client or end-users.

Fourth, one of the most important issues highlighted was the lack of skilled, trained and competent experts in the area of FM in the Malaysian market (Hamid et al, 2021). This was followed by limited understanding on asset and FM knowledge at the strategic level among the professional managers. These are among the two most discussed and deliberated by the workshop participants. As for training initiatives, it is also found that the current collaboration between the industry and higher learning institutions is very limited (Sapri, & Finch, 2009). This lack of communication might be the contributing factor to the slow development programme on competency and skill enhancement among the FM related workforce market.

Fifth, FM performance is measured and managed through various non-standardized mechanisms (Shu Hui et al, 2011). With the lack of industry experts, index and benchmarks, measuring the performance and customer satisfaction is very subjective. There is a need to formulate and standardise a set of Key Performance Indicator (KPI) for FM performance measurement (Shah Ali, 2009).

However, specifically, the main problem that could be inferred is the obscure and mismatched OF of Building & Landscape Maintenance based on MSIC 2008 for N811, 812, and 813 as in Table 2.1 by (CIDB, 2021).

Table 1.1 Problem Statement at Global, Local Industry and Actual Implementation

Problem Statement			
Problem Scale	Global	Industry	Operation & Maintenance (O&M)
Group 811	Hybrid workplace utilisation	Retaining workforce, Price increment	Lack of workforce and low skilled workers
Group 812	Internet of Things (IoT)	Traditional management mindset	Lack of workforce and low skilled workers
Group 813	Low profit margin	Small scale operation	Lack of workforce and low skilled workers

1.4 Research Aim and Objectives

The principal aim of this research is to develop OF for Section N Division 81 Services to Buildings and Landscape Activities sector based on MSIC 2008. To achieve the research aim, the following objectives must be attained as in Figure 1.1 below. In order to achieve the objectives, a Design and Development Research (DDR) research methodology was employed using multiple data collection techniques.

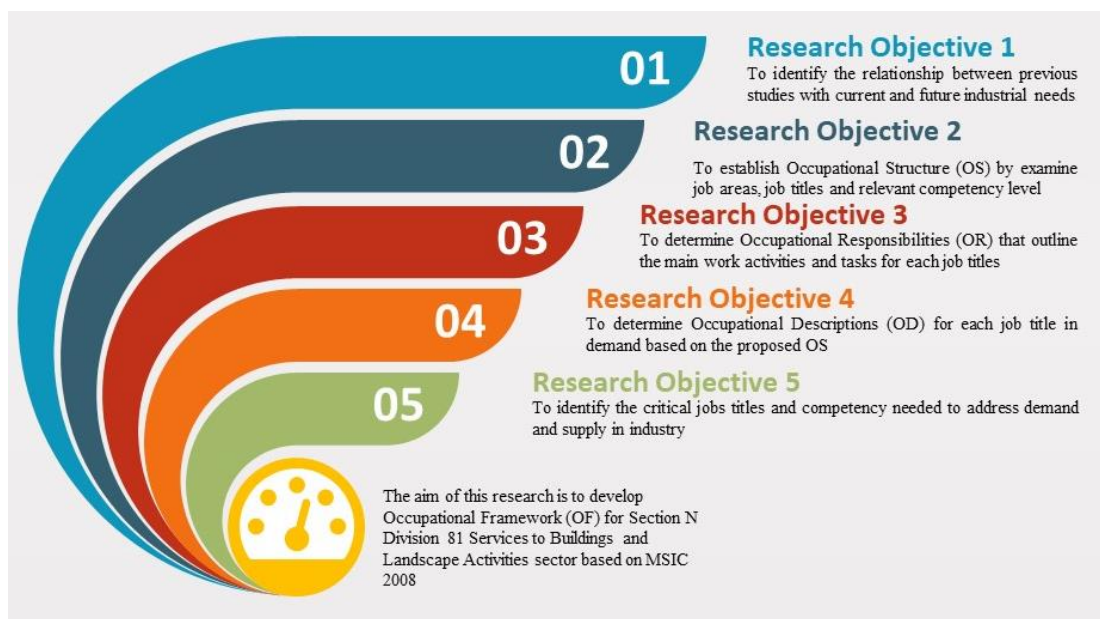


Figure 1.1 Research Aim and Objectives

1.5 Scope of Study

The scope of work for this study covers the occupation in the MSIC 2008 for Section N Division 81 Services to Buildings and Landscape Activities industry in Malaysia. Under this section there are 3 groups namely Group 811 Combined Facilities Support Activities; Group 812 Cleaning Activities; And Group 813 Landscape Care and Maintenance Service Activities.

The scope of N81 Services To Buildings And Landscape Activities includes the provision of a number of general support services namely Group 811; such as the provision of a combination of support services within a client's facilities, Group 812; the interior and exterior cleaning of buildings of all types, cleaning of industrial

machinery, cleaning of trains, buses, planes, etc. cleaning of the inside of road and sea tankers, disinfecting and exterminating activities for buildings, ships, trains, etc., bottle cleaning, street sweeping, snow and ice removal, and Group 813; provision of landscape care and maintenance services and provision of these services along with the design of landscape plans and/or the construction (i.e. installation) of walkways, retaining walls, decks, fences, ponds, and similar structures. It includes provision of a combination of support services within a client's facility,

However, it does not involve with or responsible for the core business or activities of the client. It excludes agricultural pest control (Agriculture), steam-cleaning, sand blasting and similar activities for building exteriors (Construction), carpet and rug shampooing, drapery and curtain cleaning (Other service activities). Cleaning of new buildings immediately after construction is also excluded (Construction). This study will be conducted in Malaysia with the participation of experts from various organisations in the Services To Buildings And Landscape Activities industry.

1.6 Significance of Study

The findings of this study will serve as a standard reference document for other built environment industries. The OF document resulting from this study will present the OS, job area and job titles, OR and OD, critical jobs, and necessary competencies for this industry. This study also compiled a list of the in-demand skills, emerging skills, and technology-related skills required for this industry. This OF document can be utilised by the government, research and academic, the private sector, investors, employers, and employees to enhance skills training and individual development plans.

1.7 Structure of Chapters

This chapter concludes with a brief overview of the overall study which includes as in Figure 1.2 below:

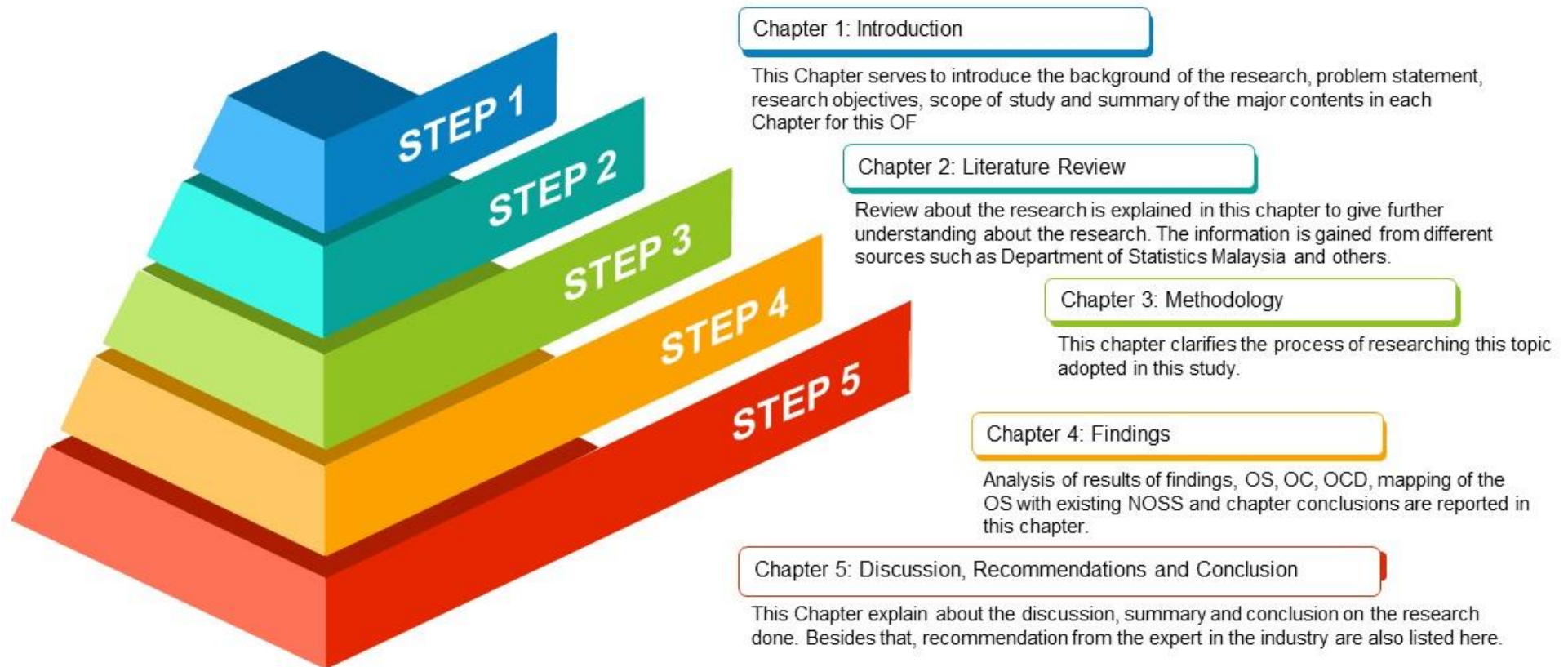


Figure 1.2 Research Methodology

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The aim of this study is to develop the occupational framework for Section N Division 81 Services to Buildings and Landscape Activities that covers three main areas: 811 Combined Facilities Support Activities; 812 Cleaning Activities; and 813 Landscape Care and Maintenance Service Activities. The objective of this study is to establish Occupational Structure (OS), Occupational Responsibilities (OR), Occupational Descriptions (OD), identify the jobs in demand, critical jobs titles and emerging skills, and relate to IR technology relevancy.

This chapter presents the literature review that was carried out to understand the current scenario of Services to Buildings and Landscape Activities Industries in Malaysia, government policies and legislation, development plan, supporting government bodies, associations, training institutions and competitiveness at international level. Findings in this chapter were obtained via literature review, document review and Focus Group Discussion (FGD) with industry experts to obtain insight on the matters at hand from a practitioner's perspective. Expert interviews were also used to obtain findings for this research.

2.2 Background of Services to Buildings and Landscape Maintenance Activities Industry

More than three (3) decades ago, Building and Landscape Maintenance Activities now known as FM was described as a hybrid management discipline that combines people, property and process management expertise to provide vital services in support of the organisation (Kamaruzzaman, 2018; CIDB, 2020). It was also seen as a resource management at strategic and operational levels of support. After a while, the definition of FM diversified, allowing it to be recognised as the integration and alignment of non-

core services to fully support the core objectives of the organisation (Nafrizon et al, 2020). The scope of the FM discipline covers all aspects of property, space, environment control, health and safety and support services and contributes to the delivery of strategic and operational objectives on day-to-day objectives (CIDB, 2011;2020) as themed in Figure 2.1 and Table 2.1. More often than not, the FM remit is interpreted as maintenance management, space management and accommodation standards; project management for new-build and alterations; the general premises management of the building stock; and the administration of associated support services (Elyna Myeda, & Pitt, 2014).

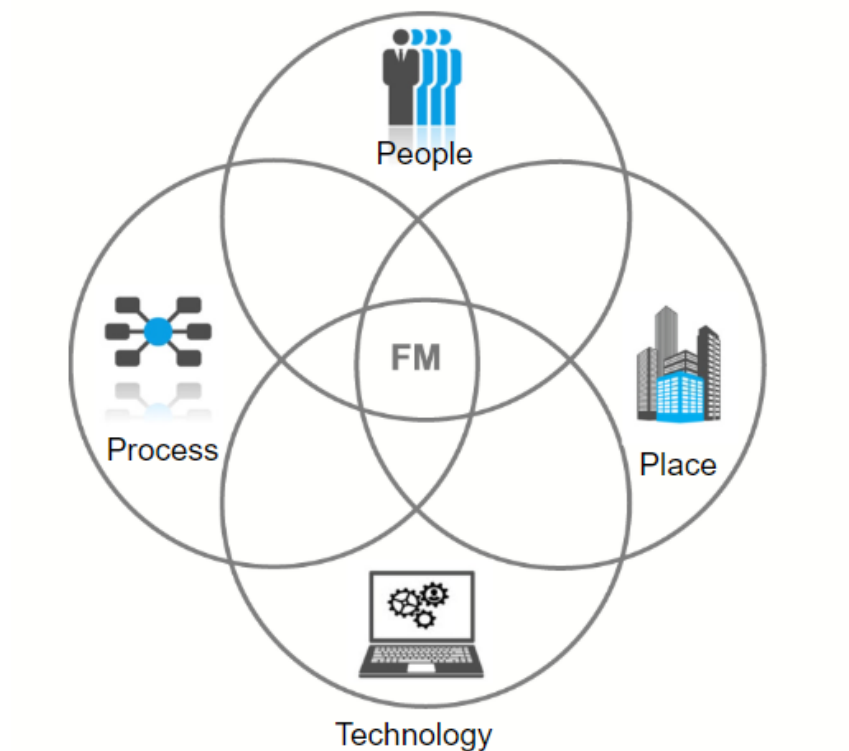


Figure 2.1 Theme for Scope of FM related to Division 81
Source: Sharainon (2022)

Table 2.1 The Theme Details Scope of FM (CIDB, 2023)

People	Place	Process	Technology
• Crucial to FM success. • Communication and interpersonal skills help facility managers work better with tenants. • FM systems helps occupant efficiency; support the corporate strategy, attract and retain.	• Second most expansive asset after humans. • Accountability; Onsite facilities – office buildings, plants and property; Offsite – alternative workplaces.	• Includes policies and procedures to guide occupant health and safety efforts. • Policies identify high level areas requiring governance. • Procedures identify actions needed to meet policy and access facilities services.	• Hardware and software system to organise, store and distribute information. • Use technology to manage buildings and facilities organisations; integrate workplace management system (IWMS); Computer Aided FM (CAFM); Computerised Maintenance Management System; Building Information Modelling (BIM)

Furthermore, the definition of the service to building and landscape activities could be encapsulated within FM definition. Institute of Workplace and Facilities Management (IWFM, UK) has adopted the ISO41011:2017 definition of FM: organizational function which integrates the people place and process, within the built environment with the purpose of improving the quality of life of people and the productivity of the core business. FM is “the professional management of the non-core organisational activities to provide an environment that enables the organisation achieve its primary objective” (Stan Mitchell, 2013; ISO FM Committee – Chairman) as shown in Figure 2.3. Institute of Workplace and Facilities Management (IWFM, UK) has adopted the ISO41011:2017 definition of FM: organizational function which integrates the people place and process, within the built environment with the purpose of improving the quality of life of people and the productivity of the core business. The Malaysian Association of Facility Management (MAFM)’s FM definition is “The

total management that integrate all services to support the core business of an organization” as in Figure 2.2.



Figure 2.2 The role of FM for Support of Non-Core Activities through Value Chain
Source: Sharainon (2022) and Stan Mitchell (2013)

Knowing the need to support the national requirements on FM which directly related to Division 81, the Ministry of Works (MOW) has proactively established a strategy for the Malaysian Construction Industry through the Construction Industry Development Board (CIDB) that sets essential strategic goals and milestones for upgrading the construction industry Malaysia to the next level. Several of the strategic planning that CIDB has put in place for the construction industry includes the Construction Industry Master Plan (CIMP) (CIMP, 2006), the Construction Industry Transformation Program (CITP) (CITP, 2015) and the most recent National Construction Policy (NCP) (NCP, 2021).

The Eleventh Malaysian Plan (RMKe-11) forecasts that the construction industry will contribute up to 5.5 per cent of GDP in 2020 and will have a double multiplier effect on growth with more than 120 industries depending on the construction sector (CIDB, 2020; Alias, 2021) and Building and Landscape Maintenance Activities plays a huge role in maintaining this infrastructure (CIDB, 2021). The CITP strongly emphasizes the improvement of quality standards in the

industry. It lays out initiatives to increase the implementation of the Quality Assessment System in Construction (QLASSIC). QLASSIC is a system that measures the quality of facility' workmanship based on the Construction Industry Standard, acting as a yardstick, also serving as a broader quality assurance for construction. CITP's which continuation of CIMP highlighted new requirement to improve quality of living standards through FM. Both Table 2.2 Categories and Specialisation of Facility Contractors known as '*Kepala*' and Table 2.3 Code and Facility Specialisation highlight the description and specialisation of FM which include Division 81.

Table 2.2 Categories and Specialisation of Facility Contractors

Category	Specialisation
F Facility (<i>Fasiliti</i>)	F01 General Building and Infrastructure Facility (<i>Fasiliti Bangunan dan Infrastruktur Am</i>)
	F02 Healthcare Facility (<i>Fasiliti Bangunan Penjagaan Kesihatan</i>)

Table 2.3 Code and Facility Specialisation

Code	Specialisation	Description
F01	Building Facility and General Infrastructure	Integrated service facility and maintenance of buildings or infrastructure which covers engineering services and services related to consumer needs
F02	Healthcare Building Facility	Integrated service facility and maintenance of buildings or infrastructure that include engineering services, biomedical engineering and services related to consumer needs

2.3 Industry and Market Analysis

There is lack of direct integrated maintenance data in Southeast Asian countries on Building and Landscape Maintenance Activities or FM work values compared to European Union or the United State of America. According to Mordor Intelligence (2023), integrated service facility and maintenance of buildings or infrastructure that

include engineering services and services related to consumer needs could be classified into hard and soft FM as in Figure 2.3.

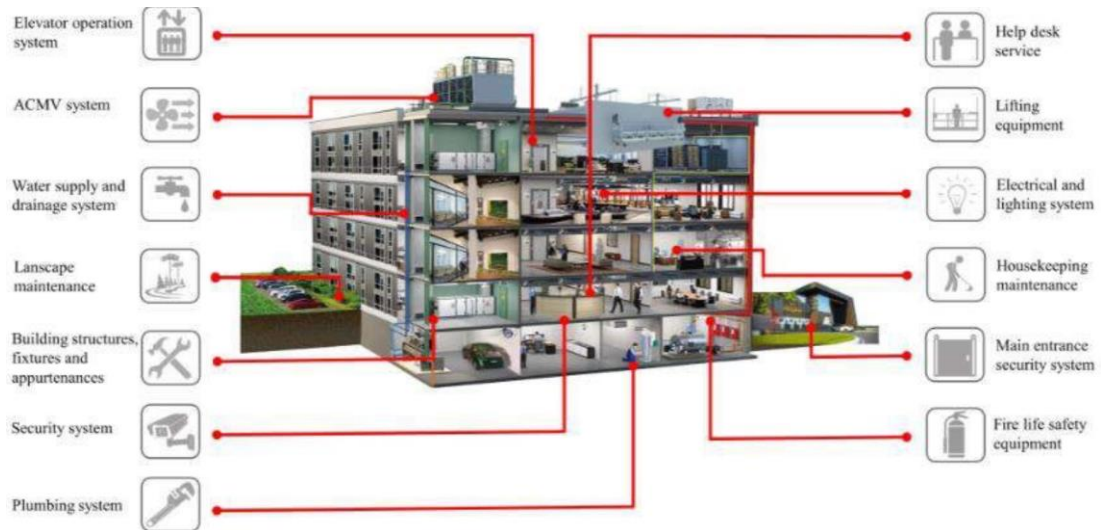


Figure 2.3 Common Soft and Hard FM as Basic of Industry and Market Analysis
Source: Sharainon (2022)

Industry and market analysis for Building and Landscape Maintenance Activities are available but it is scattered into ministries, agencies and implementation bodies that construct and own the infrastructure. The private sector is much more fragmented (CIDB, 2007, 2015;2021) as it procures up to 80% of the industry market share in construction industry (Alias, 2021). The market analysis specifically in Malaysia makes government policies and spending behaviour available, contraire the private sector analyses to be available.

In the 10th Malaysia Plan, the Malaysian Government allocates a sum of RM 20 billion (10th Malaysian Plan) to facilitate private sector investment in projects that have strategic value to the country and the multiplier effect through high on facilitation fund (Awang et al, 2017). The success of the Public Private Partnership (PPP) will be achieved if we practice these principles; principles of effective governance, depending on competitiveness and innovation to produce profitable returns values in both parties

involved. The importance of PPP is also quoted where PPP is the acquisition of innovative alternatives to determine return on investment financier. The PPP method can be realised through risk-sharing contracts, taking into account the whole life costing (WLC) and payment based on performance. In this regard the role of FM in Malaysia is very important in the success of the 10th Malaysia Plan to enable Malaysia to appear as a developed country and a high income nation (Takim and Nawawi, 2013; Abdullah et al, 2014).

The construction, service and manufacturing sectors are expected to transform and grow under the 11th Malaysia Plan (11MP), driven by the government's strategies to propel the country towards a developed nation by 2020. Under the 11MP, the sector is expected to grow 10.3 per cent per annum with a contribution of RM327 billion or 5.5 per cent to the gross domestic product (GDP) by 2020. This is in comparison with the estimated record of an average annual growth rate of 11.1 per cent during the 10th Malaysia Plan, which was supported by expansion in the civil engineering, residential and non-residential sub-sectors. Malaysia's construction sector is urged to embrace sustainability amid climate change. These policies and forecast reflect the job demand in Building and Landscape Maintenance Activities to upkeep the facilities for core economic activities.

The mid-term review of the 12th Malaysia Plan shows that the construction sector will be driven by civil engineering and residential building subsectors, with strategic initiatives focused on affordable housing and green construction products (Hong Leong Global Economic Report, 2023). These policies reflect the role of building and landscape activities remain major part on the residential sectors with technologies focusing on green technology and product application.

The government has spent billions of dollars for enhancing the asset management industry and the country towards sustainable, by giving high value

returns, risk-based and covers the entire life span of infrastructure construction (CIDB, 2020). All the facility requires proper maintenance to ensure national facilities works well and achieves their maximum life cycle (Nazali & Pitt, 2009). As such, in order to avoid incidents or unwanted incidents recurring and wasted public fund spending some cost for maintenance and implementation of FM in an organisation, is deemed necessary. With the implementation of FM, namely, managing physical facilities as well as non-physical facilities as well as determining the need in investment or business. FM is necessary in achieving the investment or business by all services involved either directly or indirectly (Isa et al, 2016; Baki et al, 2016). Among the matters included in this field such as expert advice, preservation of buildings, renovation of buildings, building cleaning, parking, electrical systems, telephone, firefighting systems, landscaping, air conditioning, rental agreement and etc (Kamaruzzaman et al, 2018; nafrizon et al, 2020).

According to CIDB (2018) CIDB has established the procedure of registration for FM contractor for code F01 under the Division of Contractor and Levy. To promote FM contractors to register with CIDB, the government has, since 2017, gave special green lane to FM contractors to register. In 2021, more than 800 contractors registered through this scheme. The special green lane was continued until 2020. Through this process, FM contractors were eligible to obtain code F01 if they have experience in undertaking any FM jobs as shown in Figure 2.4. They need to produce sufficient evidence to CIDB for them eligible to register as FM contractors.

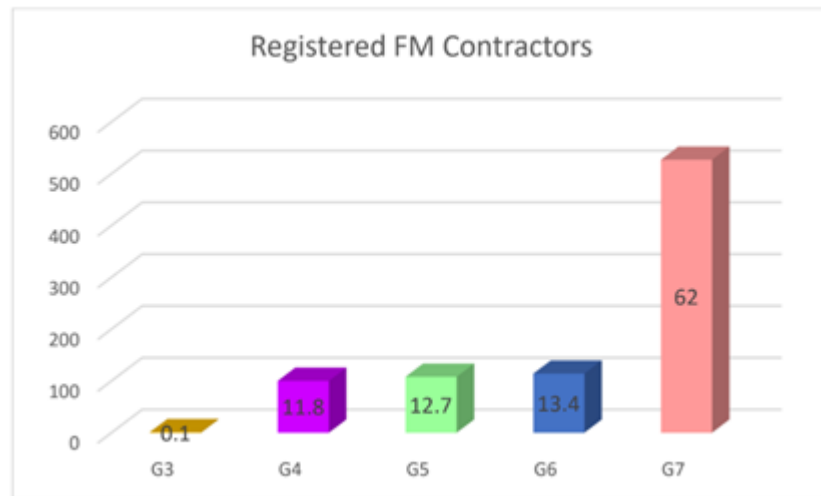


Figure 2.4 Registered FM Contractors Grade

The green lane at one point is good for creating and registering FM contractors. But in another aspect, many contractors without adequate experience would also apply for FM contractors to get F01. The latter would affect the authenticity of the database of FM contractors, as contractors who were would have to be sorted out. Currently, the practice of FM registration states that the registration for contractor and personnel scope must be done differently under F01 and F02 as shown in Figure 2.5. The contractor who represents the company i.e. directors, CEOs, general managers had to attend the 5-days course known *Sijil Kecekapan Pengurusan* (SKP), while the personnel of the company must attend *Sijil Kecekapan Kemahiran Personel* (SKKP). The scope of personnel is more on technical knowledge and skills in managing FM operation. These are the requirements that must be complied with in order to register for F01.

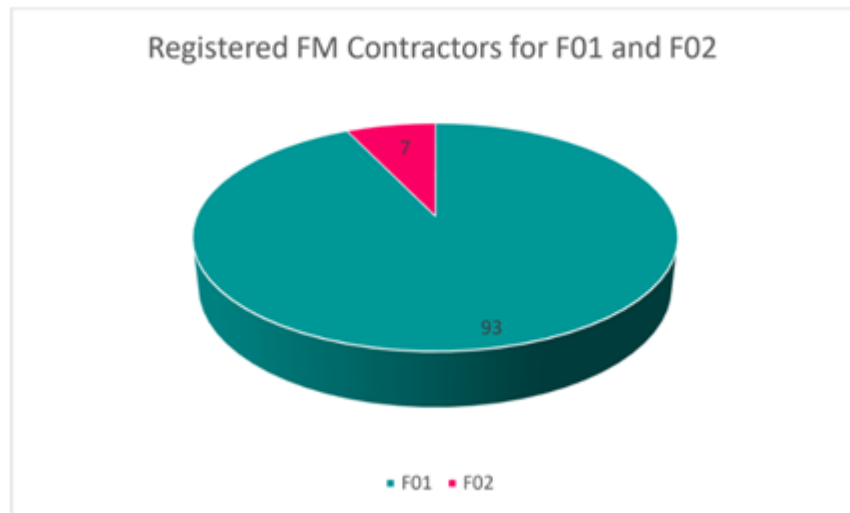


Figure 2.5 Registration of FM Contractor related to Division 81

Contractors have highlighted the difficulties of SKP for top management to undergo 5-day trainings. There is a requirement for top management to sit for another SKKP training if they were not technical people. The same module needs to undergo training twice and this can burden the contractors and to some extents were not productive and efficiently courses.

Problems arise when the contractor has to renew the F01 code. Even though SKP for owner/rectorship of contractors are available, the SKKP training must be attended by the contractors. They must have SKKP for them to renew their license. At the moment SKKP for FMM and FME statistics showed that the numbers have not been satisfactory throughout year 2019 and 2020 within 3 main routes as shown in Figure 2.6.

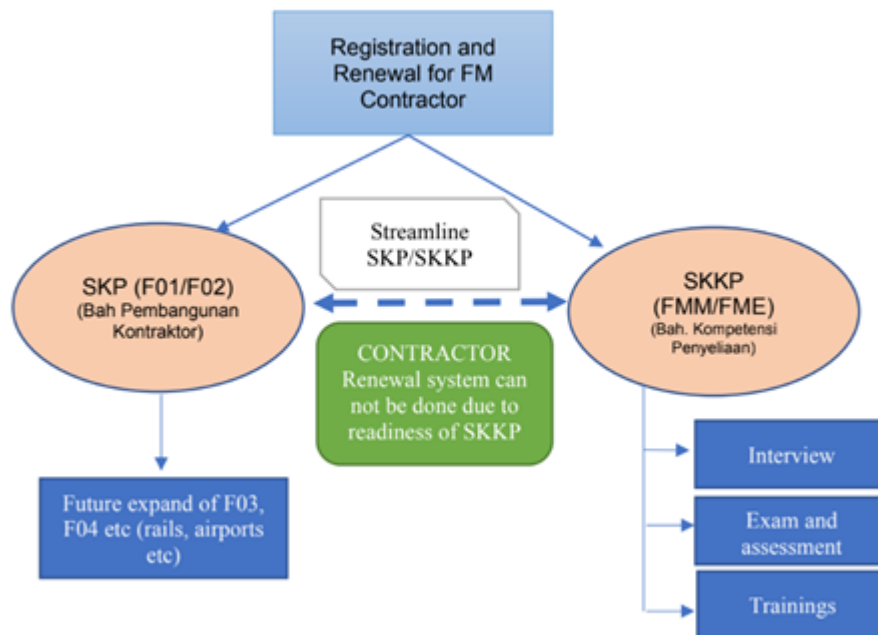


Figure 2.6 Registration, Renewal and Route for FM Contractors.

2.3.1 Growth of Services to Buildings and Landscape Maintenance Activities

The growth of Building and Landscape Maintenance Activities or FM which include Division 81 in Malaysia is very slow, and the field is still in its infancy (CIDB, 2020) although it has been around for at least 30 years. The definition of FM is poorly understood, thus not being practised in an appropriate way whereby the automated computerised system, as an integrated approach, is the closest to define the adoption of FM. The traditional management methods are mainly applied rather than an integrated FM system, although the new approach proves better for strategic operations.

Ensuring safety is strictly adhered to by all stakeholders, the sufficient availability of FM workers in the construction industry is essential which include the Division 81. The CITP puts out steps aimed at improving the level of protection in the industry. Stricter occupational safety and health standards will be added. The number

of contractors registered under the category of Facility Management F01 for General Building & Infrastructure Facility and F02 for Healthcare Facility has gradually increased, which is a positive sign to ensure that FM contracts are granted to only eligible contractors. One of the World Bank ratings to determine the ranking for ease of doing business among 190 countries is the Dealing with Construction Permit (DCP). Malaysia's ranking improved from 13 in 2017 to 3 in 2018.

The CITP and NCP 2030 puts forward steps to increase productivity levels by empowering Bumiputera human resources by expanding high-skill training and accredited professional programs to improve their efficiency, productivity, and expertise in the construction industry. Construction-related training courses will be reviewed, streamlined, and upgraded or developed nationwide where appropriate, thereby increasing trainers' quality and quantity (Nafrizon et al, 2020). In 2018, 14,252 Bumiputra contractors were trained under Continuous Contractor Development (CCD) in the technical, managerial and financial fields. These CCD points are essential in order to renew the registration of the contractor. In total, the number of trained contractors is 42,702 against the target of 22,500 since 2016 (CIDB, 2017; 2020).

One of the new additions to the CIDB trade is the specialisation under FM (FM). To date, only 642 contractors registered (CIDB, 2023). It is only appropriate to include this program for Bumiputra training to boost their chances of registration. In 2018, 174 were trained in FM against 200 Bumiputra contractors. Besides FM, IBS and specialist trades are also rigorously pursued to enhance Bumiputra's competitiveness. However, CIDB had Strengthen Operation themed with initiatives to grow the Building and Landscape Maintenance Activities or FM ad in Table 2.4 below. Statistically, the growth of the Building and Landscape Maintenance Activities is not detailed as in Table 2.5.

Table 2.4 Internal Process Perspective that focus on FM in CIDB

Theme	Short Term KPI	Tier 1 Initiatives	Tier 2 Initiatives
Strengthen Operations	FM milestones Achievements (10-year strategic plan and policy)	- Develop a 10-year strategic plan for FM (FM) industry in Malaysia - Develop the related FM policy in supporting the IR and big data initiative using the technology as facilitating platforms.	- Services for external customers - Develop FM database on WLC - Enhance FM practitioner's competency through enhancement of training modules according to registration classification covering both building and healthcare sectors - Improve FM personnel competency development and the entire accreditation system for FM (long term planning)

Table 2.5 General Growth of the Building and Landscape Maintenance Activities

Growth to Building Service & Landscape Maintenance Activities	
Group 811 Combined Facilities Support Activities	175 trained building service contractors up until 2021 10 Concession Companies operating in Malaysia, with a contract value of around RM4.98 billion, with a contract period of most 5 to 10 years. - Main areas to be exemplary to Malaysia maintainability, acquisition, Smart FM and workforce development, adapt ISO 41001 to improve capability and quality of service delivery. - Quality service at an optimal cost through the partnership method in services in terms of maintenance such as Mechanical System maintenance (elevator, air conditioning, system fire prevention and others), electrical system maintenance, Cleaning Services, Security Control, Civil Works, Structural and Architectural, Utility Bills and others involved. This is to ensure that the building achieves Building Energy Index (BEI) at a rate of 125 KiloWatt Hours per year (kWh/yr), the sustainability and lifespan of the building can be optimized though most Federal Buildings (BGP) are old and infirm (8 years to 70 years)
Group 812 Cleaning Activities	
Group 813 Landscape Care and Maintenance Service Activities	

However, there is no actual value to estimate the growth of maintenance activities across construction industry maintenance activities, though it exists in fragmentation of ministries, agencies, private organisations and non-government organisations. The general statistical data available is in Table 2.6 which is acquired through ministry speech and has yet to be processed into a statistical data that could be used in any kind. Most data related to building and landscape maintenance activities are available by government agencies in the form of open data. However, the data is not enough to be used as statistics but rather a simplified and/or fractions data such as list of contractors, numbers of location which mixes the new project and maintenance works. In addition, it is strongly believed that there are still many building and landscape maintenance contractors who have yet to register under CIDB as mentioned in the ministerial speech by former MOW, Yusof (2023) recently that “maintenance contractor need to be registered under CIDB”. These unregistered contractors impede the numbers of registration of works contracted and delivered, hence the types of work engaged, value of works involves, labour and trade applied and the big data statistics.

Table 2.6 Statistic of Growth of the Building and Landscape Maintenance Activities

Statistics of Growth to Building Service & Landscape Maintenance Activities			
	Malaysia Standard Classification of Occupations (MASCO)	Department of Statistics Malaysia (DOSM) and Professional Boards	Ministry of Local Government Development
Group 811 Combined Facilities Support Activities	2142 Civil Engineer - Facilities Engineer - Maintenance Engineer - Facilities Planning Specialist - Facilities Executive 263 Environmental & Occupational Health & Cleaning Professional	• 3, 217 Registered Civil Engineer by the Board of Engineers could be related to 642 registered maintenance contractor's companies • 270 Registered Other Engineers by the Board of Engineers could be	No actual data related to building and landscape maintenance activities or in general, maintenance.

Statistics of Growth to Building Service & Landscape Maintenance Activities			
	Malaysia Standard Classification of Occupations (MASCO)	Department of Statistics Malaysia (DOSM) and Professional Boards	Ministry of Local Government Development
	- Building Auditor 3112 Civil Engineering Technicians - Building inspector - Green Building Facilities Maintenance Technician - Green Building Facilities Maintenance Assistant Technician 3123 Construction Supervisors - Supervisor Building Operation	related to 642 registered maintenance contractor's companies No Actual Data other than within the 642 maintenance contractor's companies No Actual Data other than within the 642 maintenance contractor's companies	
Group 812 Cleaning Activities	3129 Other Supervisory Not Elsewhere Classified - Cleaning Supervisor All under 5151 Cleaning & housekeeping Supervisors in Offices, Hotels & other Establishment All under 5152 Domestic Housekeeper	No Actual Data other than within the 642 maintenance contractor's companies	

Statistics of Growth to Building Service & Landscape Maintenance Activities			
	Malaysia Standard Classification of Occupations (MASCO)	Department of Statistics Malaysia (DOSM) and Professional Boards	Ministry of Local Government Development
	All under 5153 Building Caretakers All under 7133 Building Structure Cleaners All under 9111 Domestic Cleaners & Helpers All under 9112 Cleaners & Helpers in Office, Hotel & Other Establishment All under 9121 Hand Launderers & Ironers All under 9123 Surface & Window Cleaners All under 9129 Other Cleaning Workers Not Elsewhere Classified All under 9613 Sweepers & Related Labourers		
Group 813 Landscape Care and Maintenance Service Activities	3123 Construction Supervisors - Landscape Supervisor	No Actual Data other than within the 642 maintenance contractor's companies	

2.3.2 Value Chain Related to Services to Buildings and Landscape Maintenance Activities

The economics of FM is strongly shared with construction project management as continuity from project development to project maintenance. The common value chain in business might not be suitable for construction industry which include Division 81.

The typical conventional project management stages are divided into Inception, Design, Tender, Construction which would last up to 20 years, depending on project scale and complexity and Operation and Maintenance (O&M). The O&M is the stage for FM under Division 81 to be cover could last until 100 years of more, depending on the facility usage (Elyna & Pit, 2014). In supporting the stages in construction project management and maintenance, support matter at macro including material, tool and equipment, financing, transportation, human resources, technology, regulation and research (CIMP, 2006) as shown in Figure 2.7.

Translating the value chain of construction project management and maintenance will involve value management during Life Cycle Costing (LCC) to maximise the value of invested facilities for any organisation. The construction project management is stages of proposal of facilities and construction, in which the continuation of maintain the proposal, design and technicalities to be used until the facilities is demolished (CIDB, 2019). This is shown in Figure 2.7. Value chain element based on Figure 2.8 were only translated to Material, Information and Financial by Hamid et al (2021) as in Table 2.9.

PRIMARY	INCEPTION	DESIGN	TENDER	CONSTRUCT	OPERATE & MAINTAIN	CLIENTS
SUPPORT	Building Materials					
	Tooling and Equipment					
	Finance and Insurance					
	Utilities and Transportation					
	Human Resources					
	Information, Communication and Technology					
	Regulation and Enforcement					
	Research and Development					

Figure 2.7 The Value Chain of Construction Project Management Stages and Macro Matter that directly impact FM practice in Division 81

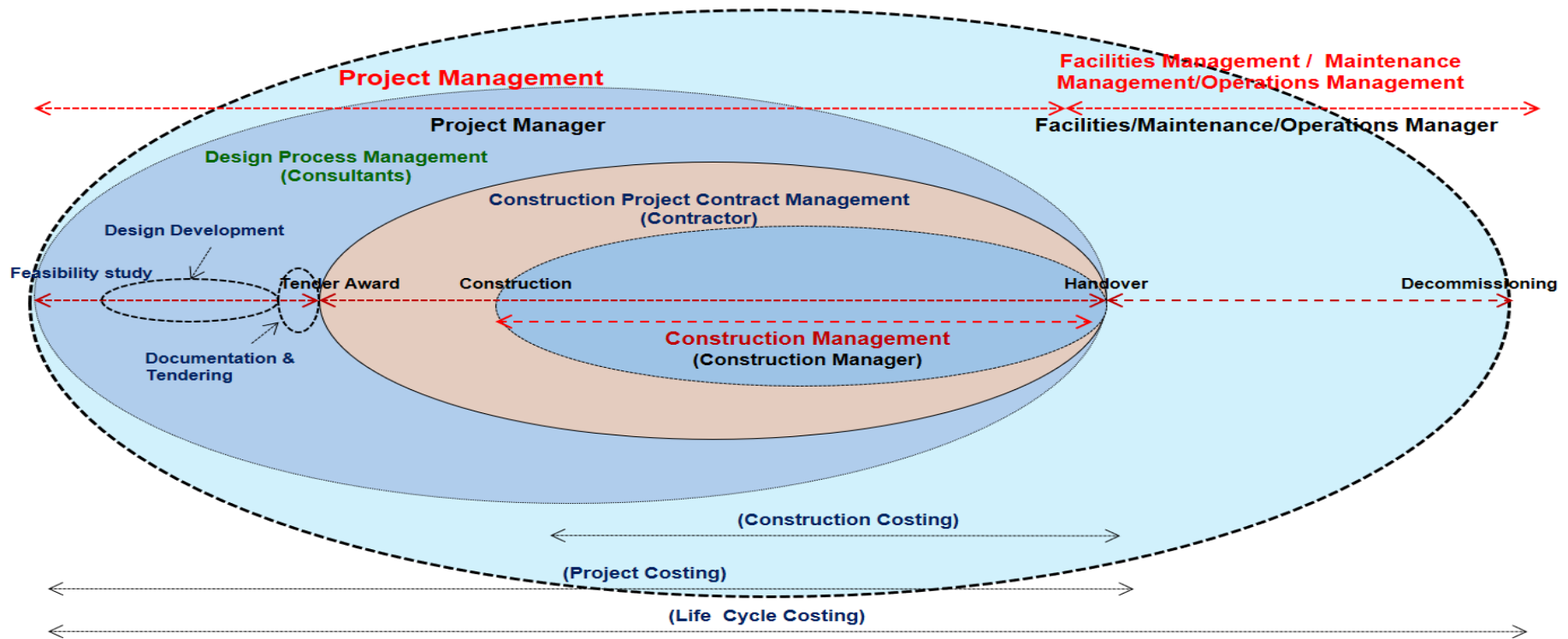


Figure 2.8 Life Cycle Costing which related Construction Project Management and FM practice
Copyright: PF Hassan, Mat Noor MS (2021)

Flow Risk	Element	Solution
Material	Single sourcing risk	- Multiple sourcing - Alternative sourcing in and out
	Sourcing flexibility risk	- Resilience supply chain - Procurement contract model
	Supply product or service monitoring/ quality	Alternative sourcing in and out
	Supply capacity	- Outsourcing - Build a flexible web or partners - Early supplier involvement
	Supplier or service provider selection/ outsourcing	- Alternative sourcing in and out - Selection model based on cost, quality, responsiveness, strategic and operating constraint - Incentive conflicts and coordinating contracts model
	Operational disruption	- Alternative sourcing in and out - Supply chain design - Operational hedging
	Political risk	Operational hedging
	Supply chain partners relationship	- Discount contract module - Improvise contract with aligned incentives
Information	Information accuracy	- Aligning interest - Application of best practices - Improvise inventory data handling and policies
	Information system security and disruption	- Contingency planning - Assess and manage the information system of the firm and supply chain partners
	Information outsourcing	'Value-added' outsourcing - Improve visibility
Financial	Price and cost risk	- Framework to enable supply chain driven profit growth - Real options application
	Financial strength of supply chain partners	- Early-payment programs - Stock-price benchmarking
	Financial handling and practice	Early-payment programs

Figure 2.9 Supply Chain Elements related to FM
Source: CIDB (2021)

2.3.3 Employment Statistics

According to CIDB, (2020;2023), in 2018, 14,252 Bumiputra contractors were trained under CCD in the technical, managerial and financial fields including the FM contractors. These CCD points are essential in order to renew the registration of the contractor. In total, the number of trained contractors is 42,702 against the target of 22,500 since 2016. One of the new additions to the CIDB trade is the specialisation under FM. To date, only 642 contractors have registered. It is only appropriate to include this program for Bumiputra training to boost their chances of registration. In 2018, 174 were trained in FM against 200 Bumiputra contractors. Besides FM, IBS and specialist trades are also rigorously pursued to enhance Bumiputra's competitiveness. See Figure 2.10 and 2.11.

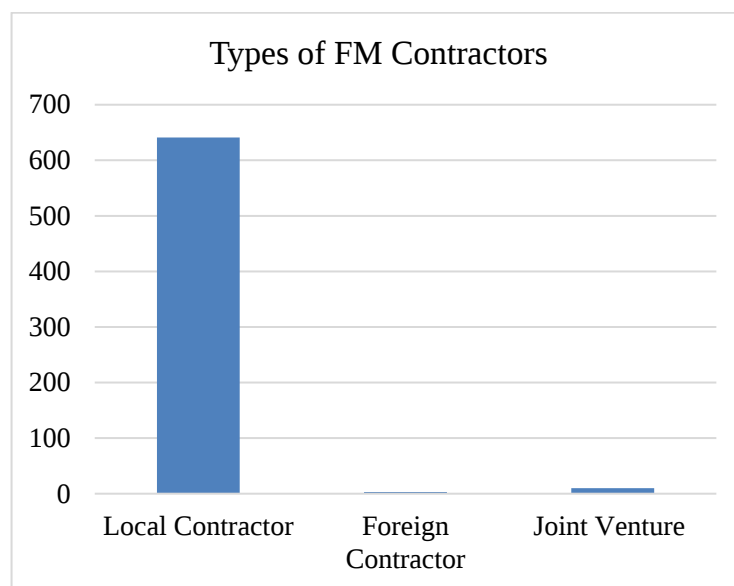


Figure 2.10 Numbers of Types of FM Contractors in Malaysia
Source: CIDB (2021)

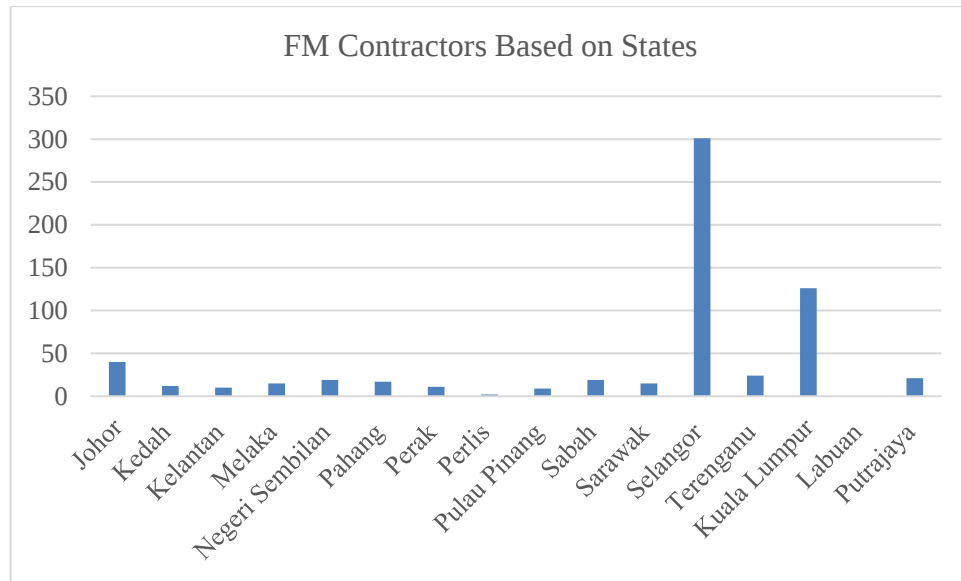


Figure 2.11 FM Contractors Based on States in Malaysia
Source: CIDB (2021)

2.4 Industry Comparison Between Malaysia and Selected Countries

The FM field is much more developed and widely practised by property developers/ companies in the West in which the value of the service was accurately measured. According to CIDB (2020), there is a stark contrast of FM practice between Western and Asian countries (Kamaruzzaman et al, 2018). In some countries, like Japan, Australia, New Zealand, Hong Kong and Singapore, FM has shown a positive growth in the field (Haji Sapar & Lee, 2005). It is recognised in these countries as an activity that can achieve more effective management of the buildings, services and associated workforce, in support of the strategic objectives of an organisation. Internationalisation of local FM service could be done but must be equipped with ecosystem readiness.

There is a significant difference of FM development in Asian countries like Japan, Hong Kong, Taiwan, Korea, Singapore and Malaysia. Japan first embarked on introducing an integrated FM system by using the automated mechanisation – Nippon

Telegraph and Telephone Corporation. Japan sees FM as an important area in business, and the techniques of FM are increasingly used there (Teicholz, & Ikeda, 1995).

Hong Kong started implementing FM in 1994 and, until now, the FM industry has gone from strength to strength, gaining more professional members and organising successful annual conferences (Lomas, 1999). The whole area of FM is quite well developed, with the growth in the professional FM sector being matched and complemented by research and education. The growth is encouraged by the fact that Hong Kong has been a place where East meets West and has a multicultural background (Teicholz, & Ikeda, 1995).

On the other hand, Taiwan shows smaller growth than Japan and Hong Kong, but is slowly improving based on the increasing number of International Facility Management Association (IFMA) memberships.

FM in Korea is developing at a slower pace than in some of Korea's competitors in the region. FM is perceived as a new term, as indicated in a survey by the Ministry of Industry and Trade: only 2.7 per cent of the respondents were familiar with the concepts of FM. Despite the low number, multinational companies like Samsung, Hewlett-Packard and IBM Korea have used international FM consultants in their business organisations. From an educational perspective, the well-attended Asian FM Conferences signify a growing interest in FM.

The development of FM in Asian countries like Hong Kong, Malaysia and Singapore is based on three areas, namely, practice, research and education. A survey of these countries by Moore and Finch (2004) showed clear signs of progress in Hong Kong and Singapore and mixed signals in Malaysia, concluded by the little evidence of real tangible and visible progress in the field. The study shows that a general lack of understanding and progress are the key drivers that hamper the development of FM

in Malaysia. It is also anticipated that the lack of attention given to environmental issues in South-East Asia hampers FM organisations from achieving efficiency.

The Asia Pacific market in general shows an emphasis on the traditional function of property management in FM, and the awareness of the impact of FM on overall business is also low. Similarly, the South-East Asia region shows unimpressive progress of FM development whereby property managers and owners are facing increasing competition and escalating maintenance costs. Stakeholders should focus on the strategic role of FM as opposed to simply managing and maintaining buildings. This would then allow their respective organisations to maximise the value of their property assets. However, throughout the world, the most prominent issue is low workforce skilled worker as in Table 2.7

Table 2.7 Comparison of the Building and Landscape Maintenance Activities to Different Countries

Country	Group 811 Combined Facilities Support Activities	Group 812 Cleaning Activities	Group 813 Landscape Care and Maintenance Service Activities
USA	Lack of Facility Information Availability; Inefficient Facility Compliance; Hybrid Workspace Utilization; Proper Energy Management	Retaining talent; Tight profit margin; Ever changing regulation and compliance	Shortage quality labour; Low bid contract; Workers' compensation cost
European	Retaining workforce; Increase price on material;	Quality workforce; Efficiency improvement, Tight budget; Safety & health of worker; Sustainability; Service speciality	Outsourcing the human resource
China	Lack of internal expertise; Traditional	Middle class focused; Low wage labour; time intensive; less regulation	Low carbon behaviour maintenance

Country	Group 811 Combined Facilities Support Activities	Group 812 Cleaning Activities	Group 813 Landscape Care and Maintenance Service Activities
	management mindset		
Korea	IOT; Proposing Supply Chain Model; Workforce training; Smart FM	Not recognised as intellectual property/ high competency job	Reduction of environmental load
Australia	Segmented management by types	Domestic and commercial demand; Smart Cleaning; Sustainability;	Property driven; Track recorded competitive based; low new green space investment; Small scale contractor; Narrow market
New Zealand	Lack of funding; Operational is prioritised than strategic services; Skilled personnel	Low skilled worker; Low rate;	Residential sector focus; Fragmented nature of maintenance
Japan	Highly competitive market;	Workforce shortage; Exorbitant rate;	Lack of local workforce;

2.5 Industrial Revolution Related to Industry Under Services to Buildings and Landscape Maintenance Activities

Even though the IR 4.0 in the paradigm of Information Society is still being implemented, the readiness of IR 5.0 in the paradigm of Societal Technology cannot be ignored. However, there is no specific data related to Building and Landscape Maintenance Activities or FM to date. Table 2.8 highlight the general main aspect of IR to FM.

The CITP and NCP also calls for increased Information Communication Technology (ICT) adoption and mechanisation in the industry, and innovations in facility research. To that end, collaborative partnerships will be enabled between the industry and universities to co-develop research and programs on modern construction methods and technologies. In addition, the CITP and NCP calls for the adoption and

utilisation of modern construction methods and technologies to address productivity challenges in the industry.

Table 2.8 General Main Aspect of IR to Building and Landscape Maintenance Activities.

IR Related to Building Service & Landscape Maintenance Activities	
Group 811 Combined Facilities Support Activities	Human Centric related to Training, Upskilling and Ethic
Group 812 Cleaning Activities	
Group 813 Landscape Care and Maintenance Service Activities	

The CITP and NCP builds on existing measures to accelerate the adoption of Industrialized Building Systems (IBS). For example, it recommends improving the economics of IBS adoption, raising the enablers for IBS adoption by introducing a comprehensive IBS catalogue harmonised with a Building Information Modelling (BIM) design library, and improving overall regulatory support.

The NCP 2030 included the role of FM under the Division 81. The Government should continue spending on infrastructure projects under Budget 2021, leading to Malaysia's economic recovery. According to Senior Minister of Works, Datuk Seri Fadillah Yusof (2020), he stated that infrastructure projects' investments would also lead to higher GDP figures. To boost the economy further, the Government should also allocate enough funding to the CIDB to promote the construction industry.

“With enough allocation, CIDB can invest further on IR initiatives such as robotics, automation, IoT, Big Data, Virtual Reality and Artificial Intelligence. Such projects will help the Works Ministry to fulfil the aspiration of the NCP 2030.” (Minister of Works, 2020)

NCP is key initiatives by the government in transforming the whole construction sector towards the digitalisation era as well as key reference and guide for both the public and private construction sectors with respect to achieving inclusive

and sustainable national development by 2030. NCP intends to achieve some of the following objectives:

1. To develop a wholesome, inclusive and people-centric policy through the integration of planning, designing, procuring, constructing or producing, altering, repairing, maintaining and demolishing infrastructures.
2. To stimulate and enliven people's mindset and instil a culture in demanding high standard quality of construction sector.
3. To develop a comprehensive guide and strengthen capability through good governance and best practice.
4. To embrace future trends in the construction sector.

2.6 Sustainable Design Goal (SDG) Related to Industry Under Services to Buildings and Landscape Activities

In order to showcase Malaysia as a low-carbon, sustainable facility and infrastructure hub, sustainability calls for compliance with environmentally sustainable practices which would fall together including Division 81. Main problems to be tackled are reckless disposal of building and demolition waste as well as harm and repair spending after natural disasters (Khalil et al, 2011).

Recognising Malaysia's role in achieving a more sustainable world in the global economy, Malaysia has made a voluntary pledge to reduce the country's carbon emissions per GDP by 40% from 2005 levels by 2020 (KeTTHA, 2012). As a leading example for the sector, CITP and NCP also suggests adding sustainability criteria within the procurement process for public facility and infrastructure for key ministries. Imposing a tax system on excessive waste would improve the regulation of illegal dumping (CITP, 2015; NCP, 2021). The industry would be beneficial since recycled materials can then be used for other projects and purposes. Implementing better waste management practices would further benefit the sector players by decreasing waste management waste and minimising the size of the material collected from the start.

CITP and NCP are calling for the creation of Malaysia's pre-eminent research platform to promote sustainable construction excellences in the sector, recognising the relevance of sustainability to the national interest. With incentive programs to facilitate sustainable initiatives, holistic rating tools will be built and promoted. Recycling centres for building and demolition waste are recommended in priority areas with high construction activity levels to prevent reckless waste disposal.

As a leading example for the sector, CITP and NCP also suggests adding sustainability criteria within the procurement process for public facility and infrastructure for key ministries. Imposing a tax system on excessive waste would improve the regulation of illegal dumping. The industry would benefit from this since recycled materials can then be used for other projects and purposes. Implementing better waste management practices would further benefit the sector players by decreasing waste management waste and minimising the size of the material collected from the start.

2.7 Key Stakeholders

A stakeholder is a party that has an interest in a company and can either affect or be affected by the business. The primary stakeholders in a typical corporation are its investors, employees, customers, and suppliers.

However, with the increasing attention on corporate social responsibility, the concept has been extended to include communities, governments, and trade associations (Nafrizon et al, 2020; CIDB, 2021). Stakeholders can be internal or external to an organization. Internal stakeholders are people whose interest in a company comes through a direct relationship, such as employment, ownership, or investment. External stakeholders are those who do not directly work with a company but are affected somehow by the actions and outcomes of the business. Suppliers, creditors, and public groups are all considered external stakeholders.

2.7.1 Government Agencies and Regulatory Bodies

The FM practice under Division 81 is regulated by contractor's regulatory agencies, namely under the MOW. Some of the main government agencies and regulatory bodies.

i. Group 811 Combined Facilities Support Activities

Table 2.9 Government Agencies and Regulation Bodies for Group 811

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Ministry of Works	In 1980, the Government had changed the name of the Ministry of Works and Transportation to the Ministry of Works where the name has remained until now. The details of the functions of the MOW are as follows: - To plan the development of the Federal Road networks nationwide. - To coordinate and monitor the implementation of the Federal Road projects and other projects under the supervision of MOW; - To regulate the privatised maintenance work of Federal roads and; - To encourage the development of Bumiputera entrepreneurs in the construction sector; - To monitor the construction, operation, toll handling and maintenance of the tolled expressways. - To plan and coordinate human resource and financial (administration and development) of MOW and Public Works Department (PWD); - To monitor departments and agencies under its purview. - To monitor the implementation of the development projects of the Client Ministries carried out by PWD; - To give advice and support services to CIDB in the development of the country's construction industry and skilled workforce; and - To give advice and support services to MHA, BEM, BAM and BQSM in the development of the professional services programs for the domestic and international market.

No	Organisations	Overview, Roles, Functions and Responsibilities
		The ministry comprises the largest technical government agencies regulating the contractors involves in the Service Building and Landscape Activities are: - CIDB Act (Act 520). - Public Work Department (PWD)
2	Ministry of Human Resources	Department of Skill Development under the ministry regulate the National Competency Development Act (Act 652). The act to promote, through skill training, the development and improvement of a person's capabilities, necessary for a career; and to provide for other matters related to it.
3	Ministry of Energy, Green Technology and Water	The ministry comprises few authorities in energy management as facilities in construction industry consume large amount of energy and releases carbon. They are: - The Energy Commission The Energy Commission aims to balance the needs of consumers and providers of energy to ensure safe, secure and reliable supply, enhanced economic efficiency and affordability, protect public interest, and foster economic development and competitive markets in an environmentally sustainable manner. Under the act, the Energy Commission regulate the energy supply under the Energy Commission Act (Act 610). - The Sustainable Energy Development Authority (SEDA) SEDA Malaysia is a statutory body formed under the SEDA Act 2011 [Act 726]. The key role of SEDA is to administer and manage the implementation of the feed-in tariff mechanism which is mandated under the Renewable Energy Act 2011 [Act 725].
4	Ministry of Housing and Local Authority	The ministry functions at implementation level including local authorities all over Malaysia under the Department of Local Government. - Department of Local Government The department assist the local government in Malaysia and local governments are divided into three categories as follows: ☐ City Council / City Hall ☐ Municipal Council ☐ District Council The difference between the three categories are as follows: City Council/City Hall is a local authority which has been upgraded from municipal council status after having successfully achieved certain criteria which

No	Organisations	Overview, Roles, Functions and Responsibilities
		include the total population exceeding 500,000 people and the annual revenue exceeding RM100 million. Municipal Council refers to local authority in an urban or town centre which has a total population exceeding 150,000 people and an annual revenue exceeding RM20 million. District Council District Council refers to local authority in rural area. The criteria stipulated for a District Council status is having a total population not exceeding 150,000 people and annual revenue less than RM20 million. There are 149 local authorities (including Kuala Lumpur City Hall), consisting of 12 City Hall/Council, 38 Municipal Council and 99 District Council. There are other bodies empowered by State Government to discharge the function as local authorities such as Kulim Hi- Tech Local Authority, Perbadanan Putrajaya, etc.

ii. Group 812 Cleaning Activities

Table 2.10 Government Agencies and Regulation Bodies for Group 812

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Ministry of Housing and Local Government	In cleaning activities, the ministry relates with waste management and public Cleaning. The agencies are: i. Solid Waste Management and Public Cleaning Corporation (SWCorp) SWCorp role is to ensure more efficient and integrated solid waste management and public cleaning services while providing better satisfaction to users in terms of solid waste management and public cleaning services. It implements and enforce solid waste management and public cleaning laws and also recommend reforms to laws under Solid Waste Management and Public Cleaning Act 2007 (Act 672). ii. Local Government Department The Local Government Department is an integral component of the Ministry of Housing and Local Government, Malaysia. The department is entrusted with the responsibility to foster the development of Local Authorities (LAs) that are competitive, dynamic and sustainable in providing

		high quality urban services such as waste management, road and sewerage maintenance, management of open spaces, landscape and street lighting. In this regard, the department plays an important role in providing support services for LAs especially in terms of improving the quality of management and promoting the adoption of good management practices.
2	Ministry of Natural Resources, Environment and Climate Change	The ministry involves in managing indirectly the resource of cleaning activities and water as waste. The agency is: i. National Water Service Commission (SPAN) The agency functions in implement and enforce the water supply and sewerage service law and consider and recommend reforms to the water supply and sewerage service law under the National Water Service Commission Act (Act 654).

iii. Group 813 Landscape Care and Maintenance

Table 2.11 Government Agencies and Regulation Bodies for Group 813

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Ministry of Housing and Local Government	An agency under the ministry is directly involve in managing landscape facilities in public area. The agency is: 1. National Landscape Department (NLD) The agency was established in 1996 as an entity under the Ministry of Housing and Local Government entrusted with the responsibility of greening the Nation and ensuring our landscape is at its best condition. The Department has been mandated to lead the Nation's efforts in achieving the aspiration of Beautiful Garden Nation, in line with Malaysia's goal of being a developed nation by 2020. Furthermore, in addressing the issues of climate change the Department is committed to realise Malaysia's commitment in the protection and conservation of natural resources as declared in the Langkawi Declaration (1989), the Rio De Jaeniero Earth Summit (1992), and COP15 (U.N. Climate Change Conference 2009). Functions of the NLD include: 1. To plan, coordinate, implement and regulate the landscape development, open spaces

		requirement, green areas and national recreational facilities. 2. Enforcement of legislation, policies execution and guidelines at various stages of landscape planning, implementation and management. 3. To generate the development and expansion of Landscape Industry. 4. To implement and coordinate the research application programs in various landscape related fields. 5. To provide establish technical expertise for the efficient national landscape resources development. 6. To be an advisor to the various government levels in landscape planning, implementation and management. 7. As the National Landscape accreditation centre. Branch of Policy & Landscape Management 1. Policy & Corporate Management Division 2. Promotion & Landscape Industry Division 3. Research & Preservation Division 4. Landscape Management Division 5. Evaluation & Coordination Division 6. Information Technology Division Branch of Development 1. Landscape Development Division 2. Public Park Division 3. Federal Park Division 4. Technical Service Division 5. Contract & Quantity Surveying Division
2	Ministry of Natural Resource, Environment and Climate Change	Vegetation is one of the main elements in landscape maintenance which directly involves few government agencies under the ministry. They are: 1. Department of Environment The department is responsible for ensuring sustainable development in the course of national development while ensuring a clean, healthy and safe environment for its people.³⁰ National Policy on the Environment (Dasar Alam Sekitar Negara (DASN)) has been established for continuous economic, social and cultural progress and enhancement of the quality of life of Malaysians through environmentally sound and sustainable development. There are eight (8) principles listed

		under DASN to harmonise economic development goals with environmental imperatives: - Stewardship of the Environment - Conservation of Nature's Vitality and Diversity - Continuous Improvement in the Quality of the Environment - Sustainable Use of Natural Resources - Integrated Decision-Making - Role of the Private Sector - Commitment and Accountability - Active Participation in the International Community DASN seeks to integrate environmental considerations into development activities and in all related decision-making processes, to foster long-term economic growth and human development, and to protect and enhance the environment. It complements and enhances the environmental dimensions of other national policies, such as those on forestry and industry, and takes cognizance of international conventions on global concerns. 2. Department of Biosecurity The Department of Biosafety was established in 2010 as a federal department under the Ministry of Natural Resources, Environment and Climate Change through the rating of the Biosafety Core Team established in 2008. The Department is the main national authority for all activities related to modern biosafety/biotechnology and oversees all activities related to living modified organisms (LMOs) and products of such organisms. This department is also the Trustee of the National Biosafety Board (LBB) and the Genetic Modification Advisory Committee (GMAC). Currently, the Department of Biosafety is managed by 25 staff, which is structured under three (3) sections and one (1) unit which is the Research and Evaluation Section; Enforcement and Monitoring Section; Corporate and Management Section; and Integrity Unit: The Evaluation and Research Division is responsible for processing applications (for Institutional Biosafety Committee (IBC) approval, notification and registration applications) and issuing approval
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		certificates. As the Secretariat for GMAC, this section is responsible for preparing documents for GMAC evaluation, obtaining input from relevant government agencies and coordinating GMAC's recommendations to LBK. The Enforcement and Monitoring Division is responsible for all monitoring and enforcement activities, including sampling and analysis of products suspected of containing LMO, conducting investigations for suspected non-compliance activities, and enforcement of LBK decisions for approval and notification applications. The Corporate and Management Division is responsible for coordinating human resource matters, managing financial allocations for all programs/activities as well as carrying out promotions and publicity. This division is also the secretariat to the National Biosafety Board. The Integrity Unit is the focal point for the management of integrity issues in the Biosafety Department. 3. Forestry Department The Forestry Department Peninsular Malaysia (FDPM) is one of the departments under the Ministry of Natural Resources and Environment, Malaysia and comprises the Forestry Department Headquarters Peninsular Malaysia, 11 State Forestry Departments and 33 District Forest Offices located throughout the peninsular. The Department is headed by the Director-General of Forestry and assisted by two Deputy Director-Generals. At the end of 2014, the total workforce is 5,121. The FDPM is responsible for the management, planning, protection and development of the PWD in accordance with the National Forestry Policy (NFP) 1992 and the National Forestry Act (NFA) 1984. 4. Department of Wildlife and National Park In 1955, the Federal Government introduced a new legislation, "The Wild Animals and Wild Birds Protection Ordinance", to coordinate the enforcement of wildlife protection in Peninsular Malaysia. However, the administration of state
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		DWNPs were still under the respective State Governments. Between 1972 and 1976, the Federal Government, after consulting with the State Governments, federalized the administration of all states Game Department in Peninsular Malaysia following the enactment of the Protection of Wildlife Act in 1972. The Game Department was later known as the Department of Wildlife and National Parks Peninsular Malaysia (DWNP). As wildlife is one of many elements in green space, it is crucial to engage with the regulation in managing green spaces. 5. The Department of Director General of Lands and Mines (JKPTG) is in charge of managing Federal Government lands in accordance with the Federal Lands Commissioner Act 1957. The acquisition of Federal Lands is for the implementation of projects to benefit the people. The means of acquisition is through purchase, reservation, application to State Governments, or land acquisition under the Land Acquisition Act 1960. To date, the acquisition and management of Federal lands have been carried out successfully through the cooperation from all agencies at both Federal and State levels. JKPTG also serves in leading the improvement of the country's land administration. Efforts that have been made to realize this aspect include the setting up of the Special Task Force to assist in the settlement of arrears of land matters; coordination of law and regulations of land management through the amendment of Land Laws; dissemination of Circulars and related Guidelines; and the introduction of ICT usage in land administration and management at JKPTG Headquarters and State offices. 6. Department of Irrigation and Drainage The Department has moved from Ministry of Agriculture & Agro-based Industry (MOA) to Ministry of Natural Resource & Environment (NRE) on March 27th, 2004. The Department which is under the direction of the NRE, has over the years taken on new and expanded responsibilities. Today, the DID's duties encompass River Basin Management and Coastal Zone, Water Resources Management and Hydrology, Special Projects Flood Management, and Eco-friendly Drainage.
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2.7.2 Industry Association & Professional Bodies

Industry association and professional bodies which gather the FM practitioner under Division 81 comprises international and local bodies and the FM practice is slowly growing, the guidance in practice mainly originate from international practice and localised by local bodies. This symbiosis creates strong relationship among international and local professional bodies which is listed below.

i. Group 811 Combined Facilities Support Activities

Industry association and professional bodies for this group are long established but remain as Non-Government Organisation rather than a group that governed by a specific statute or law. It also comprises international and local organisation that promote best management practice for maintenance and operation activities mainly for building facilities.

Table 2.12 Industry Association and Professional Bodies for Group 811

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Institute of Workplace and Facilities Management (IWFM, UK)	IWFM has provided international platform for FM through networking, guidance, training courses, publication, community-ship and mentoring to the professional in the field of O&M of facility.
2	International Facility Management Association (IFMA)	Founded in 1980, IFMA is the world's largest and most recognised association for professional facility manager with over 24,000 members in more than 100 countries, including Malaysia. IFMA provide core competency courses, online training, partner courses, local training provider, webinars and credential to member and selected non-members throughout the world.
3	Malaysian Association of Facility Management	<i>Persatuan Pengurusan Fasilitas Malaysia</i> or Malaysian Association of Facility Management (MAFM) was initially formed in 2005 with its major agendas to bridge academicians with industry players on knowledge sharing podium via strengthening all aspects of FM, spearhead related activities and to establish MAFM as a valid and legal society in Malaysia. It was led by a majority group of academicians, supported by few industry players.

No	Organisations	Overview, Roles, Functions and Responsibilities
	Malaysian Institute of Property & Facility Managers (MIPFM)	<i>Institut Pengurus Harta dan Fasiliti Malaysia</i> [Malaysian Institute of Property and Facility Managers] (MIPFM) formerly known as Malaysian Institute of Professional Property Managers (MIPPM) was founded in 2011 through the spirit of cooperation and professional commitment by the private practitioners to promote the role of Property Managers, Asset Manager and Facilities Manager in Malaysia. The Mission Statement of MIPFM also include upholding the integrity of the profession, to upkeep and promote the development of the profession. In line with this, MIPPM provides a forum for promotion of any cause common to the business interest of members to sustain honourable practice, to discourage malpractice and to encourage actively strict observance of the Code of Ethics and the Code of Professional Conduct prescribed by the Institute. In qualifying members, the Institute promotes education, training and holds examinations.

ii. Group 812 Cleaning Activities

As emerging field after the Covid19, the field comprises new job title but few professional organisations. The organisations remain as Non-Government Organisation in advocating cleaning activities in many areas. They are:

Table 2.13 Industry Association and Professional Bodies for Group 812

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Malaysia Association of Cleaning Contractors (MACC)	The Malaysian Cleaning Contractors Association, formerly known as the Selangor and Federal Territories Cleaning Services Association, is an organization that represents cleaning contractors, suppliers of materials, equipment and laundry equipment as well as support services such as janitorial services and pest control. Registered on 7 April 1994 with 8 members consisting of cleaning contractors in Selangor and the Federal Territory. In 2000, with the participation of cleaning contractors from Penang, Johor, Negeri Sembilan, Melaka, Pahang and Perak, the name of the association

No	Organisations	Overview, Roles, Functions and Responsibilities
		was changed to the Malaysian Association of Cleaning Contractors, in English 'Malaysia Association of Cleaning Contractors'. or MACC. The role of the MACC is; 1. Develop the cleaning industry as a professional service through training, research, seminars, forums, congresses and so on. 2. Assist in identifying and finding solutions to problems faced by the industry to the authorities such as the problem of hiring foreign workers. 3. To regulate the industry to safeguard the interests of genuine cleaning contractors and suppliers.
2	Quality Restroom Association Malaysia (QRAM)	QRAM is a Non-Governmental Organization (NGO) founded to address the quality of Malaysian washrooms. By improving the quality of washrooms, it aims to improve the quality of life of all Malaysians. QRAM intends to generate a high level of public awareness of the importance of a quality washroom environment through education. QRAM provides a forum for public washroom providers, contractors, suppliers and users to share concerns and ideas and communicate best practices. QRAM encourages service minded persons to serve their community to improve the quality of life through: 1. Educating washroom users through trainings and seminars and poster campaigns 2. Clean Washroom Campaigns and Competitions 3. Forming strategic corporation with Government Agencies, Private Companies, NGOs, Restaurant and Coffee Shop Owners 4. Continuous Monitoring

iii. **Group 813 Landscape Care and Maintenance Service Activities**

As a relatively small scope of project, the landscape care and maintenance services activities are combination of professional bodies and training institution from government and private organisations. They are:

Table 2.14 Industry Association and Professional Bodies for Group 813

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Institute of Landscape Architect Malaysia (ILAM)	This group comprised various professionals, semi-professionals, students and private individuals who shared a passion for organising and developing green spaces. In 1982, ILAM was accepted as a member of the Malaysian Professional Centre or Balai Ikhtisas Malaysia (BIM). Subsequently, international recognition came by becoming a member of the International Federation of Landscape Architects (IFLA) and the International Union of Conservation of Nature (IUCN) in 1984. With an increasing number of local graduates from Landscape Architecture courses, there was a need to move the association forward to represent all new and existing members including design and build contractors and maintenance of facilities.
2	ICT (ICE)	ICE is the private wing of the ILAM is dedicated to technical training for landscape consultant and contractor including various competencies for different new project and refurbishment needs in Malaysian built environment.
3	Housing and Local Government Training Institute (I-KPKT)	The training agencies for Ministry of Housing and Local Government carrying out training for six (6) study centres including City Planning and Urbanization, Landscape Management, Local Government, Housing Management, Solid waste management, Understanding and enforcement of the Law, Organizing conferences, seminars and workshops related to local government at local and international levels, Channelling the latest information in relation to policy changes, policies and ministry goals from time to time.
4	Institut Latihan Dewan Bandaraya Kuala Lumpur (iDBKL)	The organisation is meant to train and equip Dewan Bandaraya Kuala Lumpur (DBKL) employees as the best example, provide quality training services that are responsive and meet the functional requirements of DBKL in line with the current government policy by emphasizing the real reality of municipal issues, provide international exposure to open opportunities for DBKL employees to build a wider network of professional relationships, and become a reference centre, knowledge sharing centre, information exchange forum and best work practices for Local Authorities.

2.7.3 Research & Training Institutions

Realising competency of FM is slowly growing but strongly related with other professional bodies such as engineer, architect, landscape architect alike, continuous training is need by certified professional's institution and regulators. Some of the main research and training institutes.

i. Group 811 Combined Facilities Support Activities

Research and training institution in the group would established in the government agencies (for the government staffs), professional bodies and regulators of the industry as follow:

Table 2.15 Research and Training Institutions for Group 811

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Construction Research Institute Malaysia (CREAM, CIDB)	CREAM is committed to build partnerships with the industry's stakeholders and researchers while exploring and encouraging the development of a knowledge-based industries as well as ready to meet current demands and challenging changes. CREAM is the leading-edge research institute for technology innovations in the construction industry; one-stop centre for product inspection, testing and certification services; elevates safety, health, environment and quality of the construction industry and unify construction industry players from public and private sectors, both local and international.
2	Construction Labour Exchange Berhad (CLAB)	CLAB provide foreign workers in the construction industry in Malaysia. These efforts including accepting from contractors, foreign construction workers with valid permits when they no longer have projects, redistribute these workers to construction companies that is in need for projects, bring in foreign construction workers from source countries to meet the needs of the construction industry, and create pathways and promote the accreditation and upskilling of these workers including contractor for maintenance works.
3	Centre of Excellence of Technology and Engineering (CreATE)	CREaTE was created to achieve the goal of producing competent and professional staff to achieve PWD Malaysia's desire to become a world-class service provider and centre of excellence in the field of asset management, project management and engineering for the development of national infrastructure based on

No	Organisations	Overview, Roles, Functions and Responsibilities
		creative and innovative human capital and the latest technology. The function of the organisation is to improve ability & ensure officers achieve the set competencies, to be a centre of innovation as well as engineering development and research, form excellent human capital and strengthen productivity, optimizing the cost of implementing learning programs and being able to train PWD officers to be competitive with today's challenges, and technical reference centre.
4	The Malaysian Association of Facility Management (MAFM)	MAFM is taking further strides in bringing about holistic enhancements to the FM Industry taking into consideration the following external factors including advent of Industry Revolution 4.0 with the impact of digital technology in the way we work in the FM Industry, the impact of climate change to the FM industry, the impact of pandemics to the FM Industry, the impact of global political and economic trends via the following strategies: 1. Introduction of the Facilities Management Book of Knowledge (FMBOK) which would be a reference for all academic and professional development of students and FM practitioners 2. Introduction of the FM Best Practices Benchmark Report which would be a reference for FM industry stakeholders for purpose of making strategic and tactical decisions 3. Actively engage the MOW and PWD for the establishment of the Centre of Excellence for Asset and Facilities Management 4. Actively engage CIDB to provide more incentives and benefits for registered FM Contractors 5. Actively engage FM stakeholders to obtain views and comments for purposes of proposing changes to policies, rules and regulations related to the FM Industry 6. Network and collaborate with local and overseas professional bodies to keep abreast with the latest trends in the FM industry
5	Malaysian Institute of Property & Facility Managers (MIPFM)	Formerly known as Malaysian Institute of Professional Property Managers (MIPPM), the institute was founded in 2011 through the spirit of cooperation and professional commitment by the private practitioners to promote the role of Property Managers, Asset Manager and Facilities Manager in Malaysia. MIPPM provides a forum for promotion of any cause common to the business interest of members to sustain honourable

No	Organisations	Overview, Roles, Functions and Responsibilities
		practice, to discourage malpractice and to encourage actively strict observance of the Code of Ethics and the Code of Professional Conduct prescribed by the Institute. In qualifying members, the Institute promotes education, training and holds examinations including the facility contractors.
6	Malaysian Asset and Project Management Association (MAPMA)	Initiated by the PWD, Asset and Project Management Association or in short, MAPMA was registered in November 2008 to drive the professionalism of asset and project management in Malaysia across all sectors. The association is to elevate the maturity level of asset and project management by focusing on competency development, membership and international recognition through certification program, mentoring and online discussion.

ii. Group 812 Cleaning Activities

Training institution for cleaning activities reflected the same as the Group 811, in which it is a combination of government agencies, private training institution and regulators. They are as follows:

Table 2.16 Research and Training Institutions for Group 812

No	Organisations	Overview, Roles, Functions and Responsibilities
1	<i>Pusat Latihan Bertauliah Solid Waste Training Centre (SWTC)</i>	The SWCorp through the SWTC was commissioned on 31 January 2019 to run the Malaysian Skills Certification System (MSCS) through the National Dual Training System (SLDN) method by the Department Skills Development (DSD), Ministry of Human Resources in the field of skills related to solid waste management and public cleaning. The implementation of MSCS to the employees of the solid waste management and public cleaning sector (Malaysian citizens only) is aimed at creating a) recognized employees, b) more competent workers, c) employees who have social skills and social values, d) services that meet people's expectations; and e) self-regulated services.
2	<i>Pusat Pengajian Sisa Pepejal & Pembersihan Awam</i>	The Solid Waste Management Study Centre provides training to all Engineers, Health Inspectors, Assistant Engineers, Assistant Health Officers, Public Health Assistants, Administrative Assistants and Public Assistants in Federal, State and <i>Pihak Berkuasa Tempatan</i> (PBT) agencies related to the field of solid

No	Organisations	Overview, Roles, Functions and Responsibilities
		waste management. The study centre provides theoretical and practical training based on the desire to make the participants present from each agency able to practice all the knowledge gained to be applied in their respective agencies. Theoretical exposure and hands-on sessions on solid waste management can further improve the quality of solid waste management in line with current needs and requirements. 1. Increase knowledge and provide exposure to PBT members and other relevant agencies regarding solid waste disposal site engineering knowledge. 2. Understand the technical aspects that need to be paid attention to in choosing the appropriate method for the adapted technology. 3. Share information about green technology in the future. 4. Create a network between the participants present so that they can exchange experiences and ways of working between one PBT agency and another. 5. Ensure participants are skilled in managing a project. It includes contract administration, construction, pre-contract and post-project stages. 6. Create competent and skilled technical workers according to their respective disciplines in managing projects. 7. Share the latest practical methods and technologies in the country's solid waste management. 8. Understand the latest policies and legislation in the handling of the country's solid waste management. 9. Get hands-on exposure to the latest state-of-the-art solid waste management technology from operators or parties involved.
3	Contractor Certified Training Centre/ <i>Pusat Latihan Bertauliah Kontraktor</i> CIDB	Contractor Certified Training Centre known as PLBK is a training centre accredited by CIDB to implement management training programs. This is part of CIDB's initiatives to improve and impart knowledge to local contractors. Participants who have successfully completed their programs will obtain a Certificate of Management Competence known as SKP. PLBK contractor management training is targeted at contractors registered with CIDB from grades G1 to G7, company owner, Company Key Management, Administrative Personnel, Project manager, Site supervisor, academics, and student.
4	Quality Restroom Association Malaysia (QRAM)	As a Non-Governmental Organisation founded to address the quality of our washrooms and strive to improve the quality of washrooms, QRAM aim to

No	Organisations	Overview, Roles, Functions and Responsibilities
		improve the quality of life of all Malaysians. QRAM is intended to generate a high level of public awareness of the importance of a quality washroom environment through education. The organisation also provides a forum for public washroom providers, contractors, suppliers and users to share concerns and ideas and communicate best practices.
5	Malaysian Asset and Project Management Association (MAPMA)	The same in training for Group 811, MAPMA also overlaps the training as part of cleaning activities related to building. The association is to elevate the maturity level of asset and project management by focusing on competency development, membership and international recognition through certification program, mentoring and online discussion resonates to cleaning activities.

iii. Group 813 Landscape Care and Maintenance Service Activities

Training institution for Landscape Care and Maintenance Service Activities is reflected as the same in Group 811 and 812, in which it is a combination of government agencies, private training institution and regulators. They are as follows:

Table 2.17 Research and Training Institutions for Group 813

No	Organisations	Overview, Roles, Functions and Responsibilities
1	National Landscape Department (NLD)	One of the objectives of the department is research and development in managing natural resources under the research and development unit. The department also provides training and awareness program through the promotion unit including the possibility of landscape contractor training.
2	Institute of Landscape Architect Malaysia (ILAM)	One of the committees in ILAM is the committee of research and development which started in 2020 and actively promote competencies among landscape consultants and contractors including the maintenance contractors to outdoor asset.
3	Housing and Local Government Training Institute (I-KPKT)	One of the agency objectives is training and research to the local government staffs which include the development of training programs to landscape unit and department in various local governments. The landscape elements and generally parks or green

No	Organisations	Overview, Roles, Functions and Responsibilities
		spaces are a living asset to the organisation and need to be maintained properly at various scale.
4	<i>Institut Latihan Dewan Bandaraya</i> (iDBKL)	As a prime local government in Malaysia, the city council sets the benchmark to the other local governments including setting a specific training facility for the human resources. The training and research include the need to landscape department parallel with the local plan of the city until 2030.
5	<i>Akademi Binaan Malaysia</i> (ABM)	Offers training for building and infrastructure at various levels, and is expected to introduce training for maintenance contractors for competency training related to maintenance works under the F01.
6	Forest Research Institute Malaysia (FRIM)	FRIM is renowned for the technical, innovation. Certification, technology, and consultancy services related to forestry and natural resources. These include biotechnology, biodiversity, and environment in general.

2.8 Government Legislation, Policies & Initiatives

FM as continuation of managing a facility after project handover have shared the same if not more, legislation with construction industry. Hence, whatever legislation that regulates the construction project and industry could be included in framing the jurisdiction in regulating the FM field.

This also applied to policy and FM is defined as contractor under the Act 520 of CIDB. As such, all the policies suggested by the regulatory body directly include FM with other indirect policies.

2.8.1 Government Legislation

Legislation related to FM practice in the Division 81 is combining the legislation in construction project management stages and O&M. There are also major differences between the Peninsular and Sabah and Sarawak on both construction project and maintenance management. Below are the lists of major legislations related to construction project management and O&M under the related ministries.

i. Group 811 Combined Facilities Support Activities

Ranging from various professions, acts and boards of professionals. The Group 811 comprises huge number of acts that must regulated in the contract stipulated from service of works for various types of maintenance works. They are as follows:

Table 2.18 Government Legislation for Group 811

No	Organisations	Overview, Roles and Functions
1	Ministry of Human Resources	1. Employment Act 1955 (Act 265) 2. Minimum Wage Order 2022 3. <i>Akta Keselamatan dan Kesihatan Pekerjaan</i> 1994 (Akta 514). 4. <i>Akta Kilang dan Jentera</i> 1967 (Akta 139);
2	Ministry of Federal Territory	1. Federal Territory (Planning) Act,1982 (Act 267) 2. City of Kuala Lumpur (Planning) Act, 1973 (Repealed by Act 267) 3. Federal Capital Act, 1960(Act 190) 4. Perbadanan Putrajaya Act, 1995(Act 536) 5. Water Supply (Federal Territory of Kuala Lumpur) Act 581, 1998
3	Ministry of Housing and Local Government	1. Building and Common Property Act 663, 2007 2. Local Government Act, 1976 (Act 171) 3. Town and Country Planning Act, 1976 (Act 172) 4. Street, Drainage and Building Act, 1974 (Act 133) 5. Uniform Building By-Laws 1984 6. <i>Akta Perkhidmatan Bomba</i> 1988 (Akta 341)
4	Ministry of Tourism, Art, and Culture	1. National Heritage Act, 2005 (Act 645)
5	Ministry of Natural Resources, Environment and Climate Change	1. Waters Act, 1920 (Revised 1989) (Act 418)
6.	States Based Act in Malaysia	1. Town and Country Planning Enactment Sabah Cap 141 2. Town and Country Planning Sarawak Cap 87 3. Local Authority Enactment, Sabah Ordinance 11/1961 4. Local Authority Ordinance Sarawak Cap 117 5. Sabah Water Resources Enactment 1998 6. Sabah Water Supply Enactment 2003 7. Sabah Drainage and Irrigation Ordinance 1956 8. Sarawak Water Ordinance1994 9. Selangor Waters Management Authority Enactment 1999(LUAS)

No	Organisations	Overview, Roles and Functions
		10. Perlis Water Supply Enactment 1952 11. Pahang Water Resources Enactment 2007 12. Kedah Water Supply Enactment 1991 13. Kedah Water Resources Enactment 2008 14. Johor Water Supply Enactment 1993 15. Negeri Sembilan Water Supply Enactment 1997 16. Terengganu Water Supply Enactment 1998 17. Kelantan Water Supply Enactment 1995 18. Penang Water Supply Enactment 1998 19. Pahang Water Resources Enactment 2007 20. Water Resources (State of Malacca) Enactment 2014

ii. Group 811 Cleaning Activities

Although Group 812 has a lot of occupational titles, the field is growing in act and regulations as below:

Table 2.19 Government Legislation for Group 812

No	Organisations	Overview, Roles and Functions
1	Ministry of Human Resources	1. Employment Act 1955 (Act 265) 2. Minimum Wage Order 2022
2	Ministry of Housing and Local Government	1. Solid Waste and Public Cleansing Management Act 2007 (Act 672) 2. <i>Undang-Undang Kecil Pemungutan, Pembuangan dan Pelupusan Sampah Sarap 2007</i> 3. Strata Act 1985 [Akta 318] 4. Strata Management Act 2013 [Akta 757]; 5. Local Government Act 1976 (Act 171)
3	Ministry of Natural Resources, Environment and Climate Change	1. Environmental Quality Act 1974 [Act 127],

iii. Group 813 Landscape Care and Maintenance Service Activities

Being outdoor, the Group 813 comprises acts and regulation from various organisation and management of the outdoor spaces and green areas. They are as follows:

Table 2.20 Government Legislation for Group 813

No	Organisations	Overview, Roles, Functions and Responsibilities
1	Ministry of Human Resources	1. Employment Act 1955 (Act 265) 2. Minimum Wage Order 2022
2	Ministry of Federal Territory	1. Federal Territory (Planning) Act, 1982 (Act 267) 2. City of Kuala Lumpur (Planning) Act, 1973 (Repealed by Act 267) 3. Perbadanan Putrajaya Act, 1995 (Act 536) 4. Federal Capital Act, 1960 (Act 190)
3	Ministry of Agriculture and Food Security	1. <i>Akta Perlindungan Varieti Baru Tumbuhan</i> 2004 2. <i>Akta Racun Makhluk Perosak</i> 1974 3. <i>Akta Kuarantin Tumbuhan</i> 1976
4	Ministry of Tourism, Art, and Culture	1. National Heritage Act, 2005 (Act 645)
5	Ministry of Housing and Local Government	1. Building and Common Property Act 663, 2007 2. Town And Country Planning Act, 1976 (Act 172) 3. Street, Drainage And Building Act, 1974 (Act 133) 4. Local Government Act, 1976 (Act 171) 5. Uniform Building By-Laws 1984
6	Ministry of Natural Resources, Environment and Climate Change	1. Environmental Quality Act (Act 127) 2. Land Conservation Act 1960 (Act 385) 3. International Trade Act, Endangered Species Act 2008 (Act 686)
7	States Based Act in Malaysia	1. Town and Country Planning Enactment Sabah Cap 141 2. Town and Country Planning Sarawak Cap 87 3. Local Authority Enactment, Sabah Ordinance 11/1961 4. Local Authority Ordinance Sarawak Cap 117

2.8.2 Government Policies & Initiatives

Policies and initiatives for FM practice are mainly related to the construction industry as the FM practitioner is being viewed as a registered contractor with subcomponent intercept between architects, engineers, plumbers, technologists and landscape architects. Figure 2.12 explains the initiatives related directly to FM under Division 81.

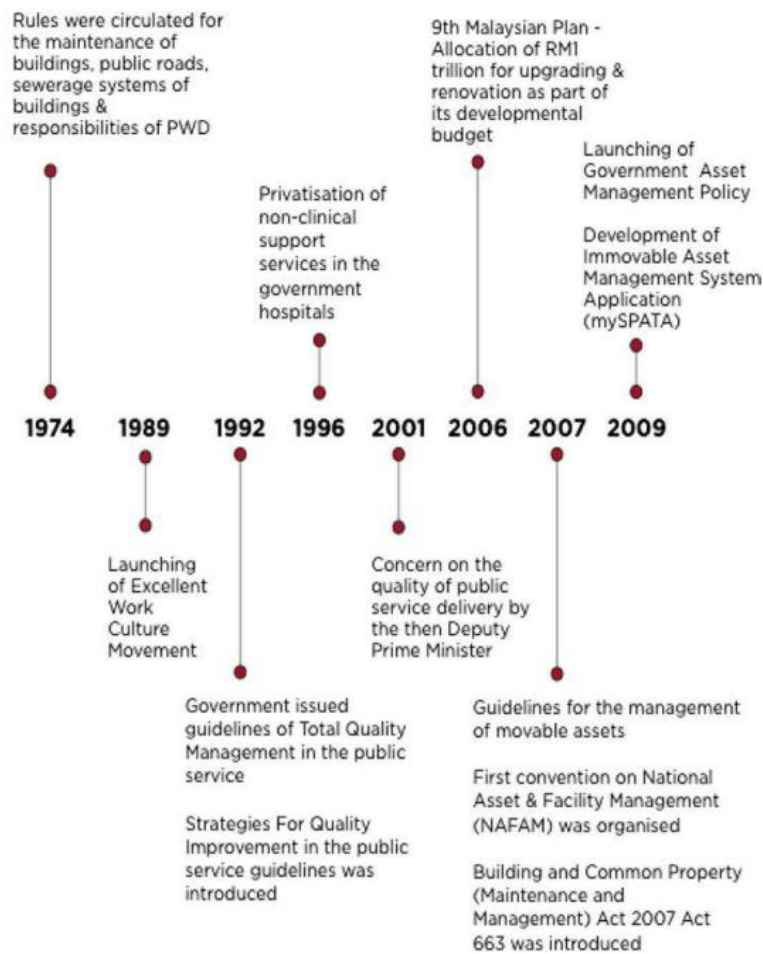


Figure 2.12 Policies and Initiatives by the Malaysian Government for Building and Landscape Maintenance Activities
Source: CIDB (2021)

Table 2.21 Government Policies for All Groups

No	Policies and Initiatives	Descriptions
1	Construction Industry Master Plan (CIMP) 2006-2015	Structure of The CIMP The Master Plan has 7 Strategic Thrusts (ST) and 8 Critical Success Factors (CSF). The CSF are identified as important elements to navigate the industry in areas that require focus to bring the Malaysian Construction industry to be among the best by 2015.

No	Policies and Initiatives	Descriptions
2	Construction Industry Transformation Program (CITP) 2016-2020	As the demand for affordable and quality houses increases in the 11th Malaysia Plan, issues regarding environmentally sustainable construction gains more prominence as specified by the Construction Industry Transformation Plan, CITP 2016-2020.
3	Construction Strategic Plan (CSP) 2021-2025	The Construction 4.0 Strategic Plan (2021-2025) is designed to align to the Shared Prosperity Vision 2030 (SPV 2030), the implementation of the National Policy on the IR 4.0 (Industry4WRD) as well as the National Internet of Things (IoT) Strategic Roadmap, the Malaysia Smart City Framework and the Digital Economy
4	National Construction Policy 2030 (NCP 2030)	The NCP 2030 aims to transform the whole construction sector towards the digitalisation era. Themed 'Digitalising the Construction Sector', the NCP 2030 by the MOW will drive the country's construction industry towards international recognition and competitiveness. The Policy serves as a key reference and guide for both the public and private construction sectors in achieving inclusive and sustainable national development by 2030.
5	National Green Technology Policy	The National Green Technology Policy (NGTP), which was launched in 2009, recognised green technology as a driver to accelerate the national economy and promote sustainable development.

i. Group 811 Combined Facilities Support Activities

The most concise policies and initiatives is in the Group 811, as it related with building project and maintenance. Unlike other Group in N81, the Group 811 has a specific policy blueprint as below:

Table 2.22 Government Policies for Group 811

No	Policies and Initiatives	Descriptions
1	Development of Preliminary Framework of FM Strategy for Construction Industry 2020-2025	This report provides insightful information about the journey, initiatives and strategies for FM from the perspectives of the government and the industry. The findings and recommendations made would be useful for CIDB to chart some strategies and empowerment for FM particularly for CIDB and FM industry at large.

No	Policies and Initiatives	Descriptions
2	National Energy Policy 2040	The National Energy Policy 2022 – 2040 was introduced by the Malaysian government in September 2022, and sets out the country’s Low Carbon Nation Aspiration 2040 which aims to achieve, among others, a higher level of RE in total installed capacity and total primary energy supply, with no new coal power plants being built.
3	ISO 41001: The World’s First International Facilities Management System (FMS) Standard	ISO 41001 offers a structural strategy that allows organizations to continually monitor their service delivery and assets to ensure efficient operations, to reduce excessive costs and to extract real value for their enterprise. Coherence is crucial to the rising demand for flexible FM services, and FM providers have started to increase global capability and increasing international usage. Meanwhile, ISO 41001 goals is to raise awareness and encourage successful FM aims to create, introduce and sustain all industries and business worldwide. It also raises the profile of FM as a profession and acknowledges its significance as part of the strategic path of the organisation.
4	Total Asset Management Manual (TAMM)	The TAMM was first released in 1992 explains five asset plans, provides a series of guideline on implementing various aspect of asset planning.
5	NAFAM First Convention 2007	Among the resolutions adopted at NAFAM 2007 Convention among others were to create an Asset Management Framework; the need to establish an application system to record all assets and monitor the success of the program; improving the process and procurement of asset of service providers; developing a suitable Government Financial Model for asset management and capacity building in asset management.
6	Second NAFAM convention.	A national level platform for both public and private sectors to exchange ideas in setting new direction and policies of asset management.
7	Malaysian Certified Healthcare Facility Manager (CHFM) competency training Programme introduced by CIDB 2015	An apparent need for the facility contractor to continuously grow and acquire better skills, wider knowledge and more effective work procedures in line with the advancement in technology and socio-economy so as to be globally competitive. For the purpose of improving the capabilities of the registered facility contractor, the competency level of the company director and technical officers need be first evaluated and accredited through FM Manager and FM Executive Accreditation Program based on competency standards that had been developed by the Board.

No	Policies and Initiatives	Descriptions
8	Registration of FM Contractors 2017	To obtain registered licenses and business registration, FM Service Providers must register with different bodies and compliance agencies.
9	Third NAFAM convention	The main aim of NAFAM 2018 is to strengthen the asset and FM practices in Malaysia. The theme of the convention is High Performance Asset: Forging Ahead. Total Asset Management (TAM) and Integrated Facility Management (IFM) approaches are beginning to be widely accepted and this has led to a paradigm shift in the way businesses are operated today.
10	First Training for Facility Management Managers (FMM) and Facility Management Executive (FME).	In order to improve the capabilities of the registered facility contractor, the competence level of the company director and technical officers must first be assessed and accredited through the FM Manager and FM Executive Accreditation Program based on the competency standards developed by the Board of Directors. The Board has made a requirement that only firms with an assessed and accredited Company Director or Technical Officer are eligible to be registered as F01 and F02 Specialisation Facility Contractors.

ii. Group 811 Cleaning Activities

The Group 812 borrowed other related ministry policies and applied to the field, as follows:

Table 2.23 Government Policies for Group 812

No	Policies and Initiatives	Descriptions
1	National Cleanliness Policy	To build a clean, sustainable and prosperous nation through the adoption of the practice of cleanliness in oneself, family, community and society in the effort to sustain the environment

iii. Group 811 Landscape Care and Maintenance Service Activities

The Group 813 also the same with group 811 and 812, but the policies involved are mostly related to construction industry including the

management of the land and green spaces. The initiatives are run by the NLD. They are as follows:

Table 2.24 Government Policies for Group 813

No	Policies and Initiatives	Descriptions
1	National Landscape Policy	The National Landscape Policy is a development policy aims at creating holistic, quality, unique identity and sustainable landscape to realize the vision of Beautiful Garden Nation that can improve the quality of life and increase economy competitiveness.
2	National Biodiversity Policy	The National Policy on Biological Diversity 2016-2025 provides the direction and framework for us to conserve our biodiversity and use it sustainably in the face of the increasingly complex challenges. It also forms part of Malaysia's response to the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020.
3	National Urbanisation Policy	This is to ensure that cities and all human settlements are inclusive, safe, resilient and sustainable. The NUP has outlined several objectives, strategies and actions towards the national vision. The NUP2 Vision is to create urban areas in Malaysia as “Sustainable Cities for People's Well Being” by 2025.
4	National Environment Policy (DASN)	DASN has been established for continuous economic, social and cultural progress and enhancement of the quality of life of Malaysians through environmentally sound and sustainable development
5	National Rural Policy 2030	NACP 2030 was enacted to ensure that this sector continues to be driven and contributes continuously to the country through the GDP and export income. NACP 2030 is expected to be able to develop the people by reducing the income gap and the poverty rate, especially for rural communities.
6	Public Park Landscape Asset Maintenance (MaPAL)	MaPAL is published as a reference material for Local Authorities, professionals, educators, landscape contractors and landscape contractors. The booklet provides guidelines for managing and maintaining landscape assets especially in public parks to ensure that landscape assets are systematically and efficiently maintained.
7	<i>Tatacara Pengurusan Aset Hidup</i>	<i>Pengurusan Aset hidup meliputi tumbuhan, haiwan dan ikan serta laporan, pemeriksaan, pelupusan, kehilangan dan sebagainya.</i>
8	Public Park Development Program	The Public Park Development Program is the main program of the NLD, the National Vision of the Most Beautiful Parks 2020 mobilizes the agency to strive to develop public parks throughout the country. Based on

No	Policies and Initiatives	Descriptions
		the standard of two (2) hectares of open space for 1,000 city residents.
9	Federal Park Development Program	The Federal Park is a park owned and managed by the federal government as a large-scale public recreation area (100 ha) and prioritizing the preservation of natural resources for recreation.
10	Urban Landscape Program	The municipal landscape program is a landscape development that is implemented comprehensively in the municipal area to create a conducive environment for the benefit of the urban community. This initiative aims to create and maintain a green environment in urban areas and reduce the heat island effect and improve the livable urban environment. The scope of the municipal landscape development project includes the provision of a network of green belts, open spaces, pedestrian spaces, landscape reserves and systematic parks in the development area.
11	National Landscape Day	National Landscape Day has been declared and celebrated on March 3 every year. The main purpose of the National Landscape Day celebration is to improve the quality of the country's landscape development by creating awareness, attracting interest and knowledge among all parties towards the landscape and environment. National Landscape Day is also held to support the development of the National landscape industry.
12	Tree Planting Campaign	The Tree Planting Campaign was launched on March 3, 1997 in conjunction with the National Landscape Day celebration. It aims to encourage the planting of shade trees in cities and public areas to improve the level of greenery, landscape quality and environment throughout the country which aims to plant 20 million shade trees by 2020.
13	Malaysia In Bloom	Malaysia In Bloom (MIB) is the rebranding of the landscape cultivation program. Sub programs for MIB are the Friends of the Park program, the landscape cultivation program, the Green Finger program and the Urban Community Garden. MIB aims to cultivate a love for the landscape and the environment at a wider level throughout the country, including all levels of society, including the collaboration of corporate social responsibility programs with corporate bodies and non-governmental organizations (NGOs).
14	International Festival on	The LAMAN Festival is an outdoor garden landscape festival that can stimulate the development of the

No	Policies and Initiatives	Descriptions
	Landscape and Park (LAMAN)	country's landscape industry as well as increase community awareness in line with the government's desire to make Malaysia a Garden Nation by 2020.
15	Investment & Trade Promotion Program	The Investment and Trade Promotion Program is under the Export Committee (JK-X), Ministry of International Trade and Industry (MITI). This program is a new program that focuses on the involvement of landscape industry players at the international level and efforts to spread their involvement to expand the country's economic opportunities. The aim of the program is to support the participation of industry players in floral festivals and international trade expos related to the landscape abroad as well as being important for the development and implementation of landscape consultancy abroad by selected consulting companies.
16	Public Park Uplifting program	Allocate allocations to improve the quality of public parks and increase the number and function of park recreational facilities under the management of PBT. This program gives priority to existing neighbourhood parks and public parks that are 5 acres up to 20 acres in size. The main scope of work for the program is the maintenance of soft landscape and hard landscape which involves pruning, replacement, thinning of tree replanting, design modification, addition of components as needed, comfort and safety for all.
17	Local Authority Tree Risk and Maintenance Program	The implementation of the tree maintenance and risk management program in the local authority is one of the programs that involves data collection, preservation and conservation for trees under the control of the local authority. The main objective of this program is to provide a tree inventory, tree risk assessment work and tree economic assessment for the trees that have been inventoried, carry out maintenance work for problem trees through an arbour-cultural approach and develop a Risk Management Plan for the trees below local authority control.
18	Minor Landscape Maintenance Program	Provision for works involving the repair, replacement and maintenance of hard and soft landscape components that have been damaged and are unsafe for use including field repairs for the comfort and safety of users.
19	Rosa Sinensis Award – Public Park Rating	The Rosa-sinensis Award - Public Park Rating is a rating initiative for public parks and green areas that are comprehensively planned, developed and managed that fulfil their development function.

2.9 National Skills Development Act 2006 (Act 652)

On June 29, 2006, the National Skills Development Act (Act 652) was formally gazetted. Its purpose is to encourage the growth and enhancement of a person's talents necessary for a profession through skill training and to address other related issues. In other words, the Act acts as national legislation for starting, developing, and putting into effect Malaysia's criteria for skill and training development. The Department of Skills Development (DSD) is the only organisation entrusted with initiating, supervising, and overseeing all processes and procedures put in place under MSCS. In contrast, this Act promotes the implementation of MSCS. The National Skills Development Act is an act to promote, through skills training, the development and improvement of a person's abilities, which are needed for vocation; and to provide for other matters connected there with. The NOSS shall be used:

- 1) to develop national curriculum for skills training programmes,
- 2) for the purposes of conducting skills training, all accredited programmes shall conform to the NOSS,
- 3) shall be used as a measure of proficiency leading to the award of a Certificate, and
- 4) may be utilized in any other way as the director General deems fit.

Under the MSCS, six processes are in place to serve the common objective of contributing to the growth of skilled labour in Malaysia. The system includes identifying the industry-driven and required skills needs, the development of four public documents: 1. the Occupational Framework (OF), 2. the National Occupational Skills Standard (NOSS), 3. Written Instruction Materials (WIM), and 4. Questions and Assessments, followed by 5. the implementation of training at industries and training institutes, and finally 6. a review of industry needs. The whole cycle of the MSCS is depicted in Figure 2.13 below.



Figure 2.13 Cycle of Malaysian Skills Certification Ecosystem
(Source: Department of Skills Development)

2.9.1 Occupational Framework

The OF is a document that outlines an OS that comprises job areas and job titles according to the job level of an industry in Malaysia. Through the OF document, the critical jobs, job in demand, competencies in demand, jobs related to technology advancement that related to current industries are discussed, as well as the OR and OD. OF is developed to cover various types of industries from small, medium and large industries and it also a step in the process of creating relevant NOSS. The classification of an OF is based on Malaysian Standard Industrial Classification (MSIC 2008).

2.9.2 National Occupational Skills Standard (NOSS)

The NOSS is a document that outlines the competency requirements for a skilled worker working in Malaysia for a certain field and job level as well as the path to achieve those skills (DSD, 2020). NOSS is developed according to the current needs of the job field as well as in line with the career structure in a job field in the industry. It is developed by a group of experts, industry practitioners and skilled workers in their respective fields according to the related industry under the guidance of a trained and certified facilitator. NOSS also outlines the minimum knowledge and skill requirements in terms of competence to perform tasks, functions and roles by a skilled worker according to their respective job fields. As of December 2022, there are 3,549 NOSS; 2,062 active NOSS (2000 NOSS + 33 NCS + 29 NDTs) (DSD, 2022).

2.9.3 Written Instructional Materials (WIM)

WIM is a document prepared by the instructor for the use of instructors and trainees to assist the teaching and learning process. The purpose of WIM is to (a) be the main learning material in the teaching and learning process; (b) ensure that the Learning Outcome in the Competency Unit (CU) set is achieved; and (c) help the instructor build self-confidence and prepare to carry out the teaching session.

2.9.4 Evaluation Questions

In terms of teaching and learning, assessment can be defined simply as a systematic process to determine the extent to which the objectives of teaching and learning in the lecture room and laboratory are achieved (DSD, 2020). Assessment in the context of the MSCS is a process of assessing the level of knowledge and skills as well as safety/environmental attitudes/practices of a candidate who follows a skills training program implemented at a DSD accredited centre. Assessment is done by using various suitable methods to assess the skills of a candidate as desired. The three key characteristics of evaluation are validity, reliability, and representativeness (CIAST, 2021b). Validity refers to the extent to which an assessment measures what it is

intended to measure, reliability refers to the consistency and stability of assessment results over time, and representativeness refers to the extent to which an assessment accurately reflects the skills and knowledge required for the job or task being evaluated. The evaluation fully satisfies the requirements specified by NOSS/NCS.

2.9.5 Implementation at Institute / Training Centre

Accredited Centre means a skills training provider, whether a training institution or a workplace (workplace) that has been approved by DSD to conduct skills training and offer Malaysian Skills Certification for certain fields and skill levels based on NOSS (DSD, 2020). There are two categories of Certified Centres: Public Accredited Centre and Private Certified Centre. The programs offered are based on the National Employment Skills Standard (NOSS) that has been developed. Skills training means work-based and industry-oriented activities that aim to provide knowledge, skills and attitudes required for the implementation of a task or work effectively, efficiently, and includes review, extension, updating and specific training related to work (DSD, 2020).

2.9.6 Industrial Need

When it comes to skills development in the industrial sector, there are specific skills and competencies that industries require in order to enhance their productivity, efficiency, and profitability. The nature of these skills may be either technical or non-technical, and they vary depending on the industry in question. To develop a training curriculum or written instructional material that meets the needs of the industry, the training centre may design a program that is either full-time or customized to meet the specific needs of the industry. It is important for the training centre to have a clear understanding of the skills required by the industry in order to develop an appropriate training program. Additionally, it is necessary to conduct a basic assessment of the retraining needs of instructors and trainers to ensure they are equipped with the necessary skills to meet the current industry demands (DSD, 2020).

2.10 Malaysia Standard Industrial Classification (MSIC) 2008

Malaysia Standard Industrial Classification 2008 (MSIC) Ver. 1.0 is a classification of all economic activities in Malaysia which adopts the International Standard Industrial Classification (ISIC) Revision 4 released in December 2006, with the necessary modifications to meet national requirements. It replaces the MSIC 2000 which was based on ISIC Revision 3.

The main purpose of the MSIC is to provide a set of activity categories that can be used for the collection and presentation of statistics according to such activities. Industries are then formed by grouping units with a common primary activity, according to specified similarity criteria. MSIC can then be used to produce statistics by activity or by industry, for enterprises as well as for establishments or kind of activity units.

The objective of an industrial classification system is to classify data in respect of the economy according to categories of activities and the characteristics of which will be similar. MSIC is a classification of kinds of economic activity and not a classification of goods and services or a classification of occupations.

2.11 Scope of Occupational Framework Based on MSIC 2008 – Services to Buildings and Landscape Activities

Based on the MSIC 2008 classification, the Services to Buildings and Landscape Activities is categorized under the Section N and Division 81 (N81). The scope of Occupational Framework for N81 includes the combined facilities support activities; cleaning activities and landscape care and maintenance service activities. Table 2.9 shows the description of scope based on MSIC 2008.

Table 2.25 Description of scope based on MSIC Classification for Division N81
(MSIC, 2008)

CLASSIFICATION	CODE	DESCRIPTION
SECTION	N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
DIVISION	81	SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES This division includes the provision of a number of general support services, such as the provision of a combination of support services within a client's facilities, the interior and exterior cleaning of buildings of all types, cleaning of industrial machinery, cleaning of trains, buses, planes, etc., cleaning of the inside of road and sea tankers, disinfecting and exterminating activities for buildings, ships, trains, etc., bottle cleaning, street sweeping, snow and ice removal, provision of landscape care and maintenance services and provision of these services along with the design of landscape plans and/or the construction (i.e. installation) of walkways, retaining walls, decks, fences, ponds, and similar structures.
GROUP	811	Combined facilities support activities This group includes provision of a combination of support services within a client's facility, such as general interior cleaning, maintenance, trash disposal, guard and security, mail routing, reception, laundry and related services to support operations within facilities. Units classified here provide operating staff to carry out these support activities, but are not involved with or responsible for the core business or activities of the client.
CLASS	8110	Combined facilities support activities
ITEM	81100	Combined facilities support activities Includes: (a) provision of a combination of support services within a client's facility (e.g. general interior cleaning, maintenance, trash disposal, guard and security, mail routing, reception, laundry) and related services to support operations within facilities but not involved with or responsible for the core business or activities of the client, management of facilities, such as military bases, prisons and other facilities (except computer facilities management) (b) operation of government owned or occupied buildings Excludes: (a) provision of only one of the support services (e.g. general interior cleaning services) or addressing only a single function (e.g. heating), see the appropriate class according to the service provided (b) provision of management and operating staff for the complete operation of a client's establishment (e.g. a hotel, restaurant, mine or hospital), see the class of the unit operated

CLASSIFICATION	CODE	DESCRIPTION
		(c) provision of on site management and operation of a client's computer systems and/or data processing facilities, see 6202 (d) operation of correctional facilities on a contract or fee basis, see 84239
GROUP	812	Cleaning activities This group includes the activities of general interior cleaning of all types of buildings, exterior cleaning of buildings, specialized cleaning activities for buildings or other specialized cleaning activities, cleaning of industrial machinery, cleaning of the inside of road and sea tankers, disinfecting and extermination activities for buildings and industrial machinery, bottle cleaning, street sweeping, snow and ice removal. This group excludes agricultural pest control (Agriculture), steam-cleaning, sand blasting and similar activities for building exteriors (Construction), carpet and rug shampooing, drapery and curtain cleaning (Other service activities). Cleaning of new buildings immediately after construction is also excluded (Construction).
CLASS	8121	General cleaning of buildings
ITEM	81210	General cleaning of buildings Excludes: specialized interior cleaning activities (e.g. chimney cleaning, cleaning of fireplaces, stoves, furnaces, incinerators, boilers, ventilation ducts, exhaust units), see 8129
CLASS	8129	Other building and industrial cleaning activities
ITEM	81291	Cleaning of buildings of all types
	81292	Swimming pool cleaning and maintenance services'
	81293	Cleaning of industrial machinery
	81294	Cleaning of trains, buses, planes
	81295	Cleaning of pest control services not in connection with agriculture
	81296	Disinfecting and exterminating activities
	81297	Cleaning of sea tankers Excludes: (a) agriculture pest control, see 01610 (b) cleaning of sewers and drains, see 37000 (c) automobile cleaning, car wash, see 45203
	81299	Other building and industrial cleaning activities, n.e.c. Includes:

CLASSIFICATION	CODE	DESCRIPTION
		outdoor sweeping and watering of streets
GROUP	813	Landscape care and maintenance service activities This group includes planting, care and maintenance of parks and gardens for private and public housing, public and semi-public buildings (schools, hospitals, administrative buildings, church buildings, etc.), municipal grounds (parks, green areas, cemeteries, etc.), highway greenery (roads, train lines and tramlines, waterways, ports) and industrial and commercial buildings; greenery for buildings (roof gardens, façade greenery, indoor gardens), sports grounds (e.g. football fields, golf courses, etc.), play grounds, lawns for sunbathing and other recreational parks, stationary and flowing water (basins, alternating wet areas, ponds, swimming pools, ditches, watercourses, plant sewage systems) and plants for protection against noise, wind, erosion, visibility and dazzling. Maintenance of land in order to keep it in good ecological condition is also included.
CLASS	8130	Landscape care and maintenance service activities
ITEM	81300	Landscape care and maintenance service activities Includes: (a) planting, care and maintenance of parks and gardens for private and public housing, public and semi-public building (schools, hospitals, administrative building, etc), municipal grounds (parks, green areas, cemeteries, etc.), highway greenery (roads, train lines and tramlines, waterways, ports) and industrial and commercial buildings (b) greenery for buildings (roof gardens, façade greenery, indoor gardens) (c) greenery for sports ground (e.g. football fields, golf courses, etc.), play grounds, lawns for sunbathing and other recreational parks (d) greenery for stationary and flowing water (basins, alternating wet areas, ponds, swimming pools, ditches, watercourses, plant sewerage systems) (e) plants for protection against noise, wind, erosion, visibility and dazzling and maintenance of land in order to keep it in good agricultural and ecological condition (f) minor incidental design and construction service activities Excludes: (a) commercial production and planting for commercial production of plants, trees, see divisions 01, 02 (b) tree nurseries (except forest tree nurseries), see 01304 (c) maintenance of land to keep it in good condition for agricultural use, see 01610 (d) construction activities for landscaping purposes, see section F (e) landscape design and architecture activities, see 7110 (f) operation of botanical gardens, see 91031

2.12 Malaysian Occupational Skills Qualification Framework (MOSQF)

The Malaysia Occupational Skill Framework (MOSQF) is a comprehensive system that classifies and organizes occupational skills and competencies in Malaysia. The framework organizes occupational skills and competencies into eight (8) different levels, ranging from entry-level to expert-level. Each competency level corresponds to different level of complexity, knowledge and autonomy required to demonstrate the competence commensurate to that level's knowledge, experience and versatility in application as depicted in the Table 2.10. These levels align with the different stages of an individual's career development, from early-stage apprenticeships to advanced levels of proficiency.

Table 2.26 Eight (8) of Malaysian Occupational Skills Qualification Framework (MOSQF)

Level	Descriptions
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 judgment. 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 judgment. 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 judgment within broad parameters. It also reflects the understanding of different perspectives, approaches or schools of thought and the reasoning behind them.

Level	Descriptions
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 judgment 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 judgment 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.

2.13 NOSS Relevant to MSIC 2008 Section N, Division 81

As way forward, the NOSS based on MSIC 2008 relevant to Division 81 was mapped to the existing Job Titles and levels to all groups 811, 812, 813. Table 2.11 until 2.13 show the existing NOSS that will be considered in future mapping of new occupational framework of Division 81.

1. NOSS Relevant to MSIC 2008 Section N, Division 81, Group 811
 - a. Operasi Bangunan
 - i. Level 5 - Pengurusan Operasi Bangunan (N811-001-5:2017)
 - ii. Level 4 - Pengurusan Teknikal Operasi Bangunan (N811-001-4:2017)
 - b. Pengurusan Fasiliti
 - i. Level 5 - Perancangan Pengurusan Fasiliti (N811-002-5:2018)
 - ii. Level 4 - Pemantauan Pengurusan Fasiliti (N811-002-4:2018)
2. NOSS Relevant to MSIC 2008 Section N, Division 81, Group 812 (Not applicable)

3. NOSS Relevant to MSIC 2008 Section N, Division 81, Group 813
 - a. Rekabentuk Taman Permainan
 - i. Level 5 - Pengurusan Perancangan Dan Reka Bentuk Taman Permainan (N813-002-5:2016)
 - ii. Level 4 - Reka Bentuk Taman Permainan (N813-002-4:2016)
 - b. Pemasangan dan Penyelenggaraan Taman Permainan
 - i. Level 3 - Penyeliaan Pemasangan & Penyelenggaraan Taman Permainan (N813-001-3:2016)
 - ii. Level 2 - Pemasangan & Penyelenggaraan Taman Permainan (N813-001-2:2016)
 - c. Operasi Arborikultur
 - i. Level 5 - Pengurusan Dan Operasi Arborikultur (N813-003-5:2019)
 - ii. Level 4 - Operasi Arborikultur (N813-003-4:2019)

2.14 Conclusion

Through this research, it is hoped that FM would represent Division 81 position on the right track to shape the construction industry forward. The COVID-19 outbreak has acted as a catalyst for change and has reiterated the need to pay attention to how facility is being managed and services are being delivered. All built environments, owned or leased offices, warehouses, retail stores or manufacturing facility, will require careful consideration and tailored plans.

FM encapsulate within Division 81 is one of green field in construction industry. As supporting for non-core business, FM can play a pivotal role in integration process, technology and process in value chain and maintaining the wildlife infrastructure while reducing carbon footprint of a facility.

In the context of NOSS, the first action needs to be taken is to review internal issues with regards to OF registration process, policies and regulations as well as review some of existing training module.

Driven by an increased focus on the user experience and business outcome, the role of FM providers is becoming more strategic and long term. With employee engagement and experience gaining importance, FM providers are working in partnership with customers.

The action plan of short, medium and long term for CIDB as encapsulated in CIDB Strategic Plan 2021-2025 (CSP) and NCP 2030 should lead the way to enhance the image FM industry to the greater height in 2021 onwards. CIDB and DSD should be a facilitator for industry players and government in particular FM, thus, Division 81.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter clarifies the process of researching this topic adopted in this study. It identifies its analytical framework beginning with its methodology and nature, location of the sample, population and sampling, instruments used, and data collection and procedures. The methodology is applied to produce deliverables that consist of OS, OR and OD, jobs in demand, critical jobs, emerging skills, and revolution technology relevancy.

3.2 Research Approach and Design

Considering the nature of this research, which aimed to develop occupational framework, the DDR methodology was chosen. A DDR approach is a comprehensive methodology which aims to develop a framework based on the analysis of the needs and is validated through the phases of design, development and evaluation. The multiple phases ensure the reliability of the results (Richey & Klien, 2007). This research sought to understand how people interpret the world and their experiences, focusing on meanings and developing ideas inductively (Easterby-Smith et al., 2002; Merriam, 2009), hence a DDR research is deemed suitable. DDR research is adopted when four key criteria are fulfilled, namely 1) the focus is on process, understanding, and meaning; 2) the researcher is the primary instrument of data collection and analysis; 3) the process is inductive; and 4) the product is richly descriptive (Merriam, 2009).

According to Cooper & Schindler (2014), research can be classified according to the purpose for which the research is to be conducted, namely descriptive,

explanatory, or exploratory. This research engaged in exploratory research which provided flexibility to the author to formulate the research development strategy and develop a systematic process for conducting the research.

Exploratory studies are valuable means for exploring what is happening and understanding new discoveries and phenomena that may have little or no theoretical literature to back up (Saunders et al., 2009). This type of study would not involve testing particular hypotheses. Yin (2016) stated that exploratory research involves gathering information and developing ideas about a relatively under-researched problem or context. The value of exploratory research is that it generates interesting differences and comparisons between more well-studied topics and those that are less well-studied (Cooper & Schindler, 2014).

Cooper & Schindler (2014) claimed it is more appropriate to conduct exploratory research by using qualitative methods. Silverman (2015) emphasised that qualitative methods would provide a deeper understanding of the concepts and avoid statistical techniques. The exploratory nature of qualitative research allowed the researcher to explore development of an occupational framework for services to buildings and landscape activities.

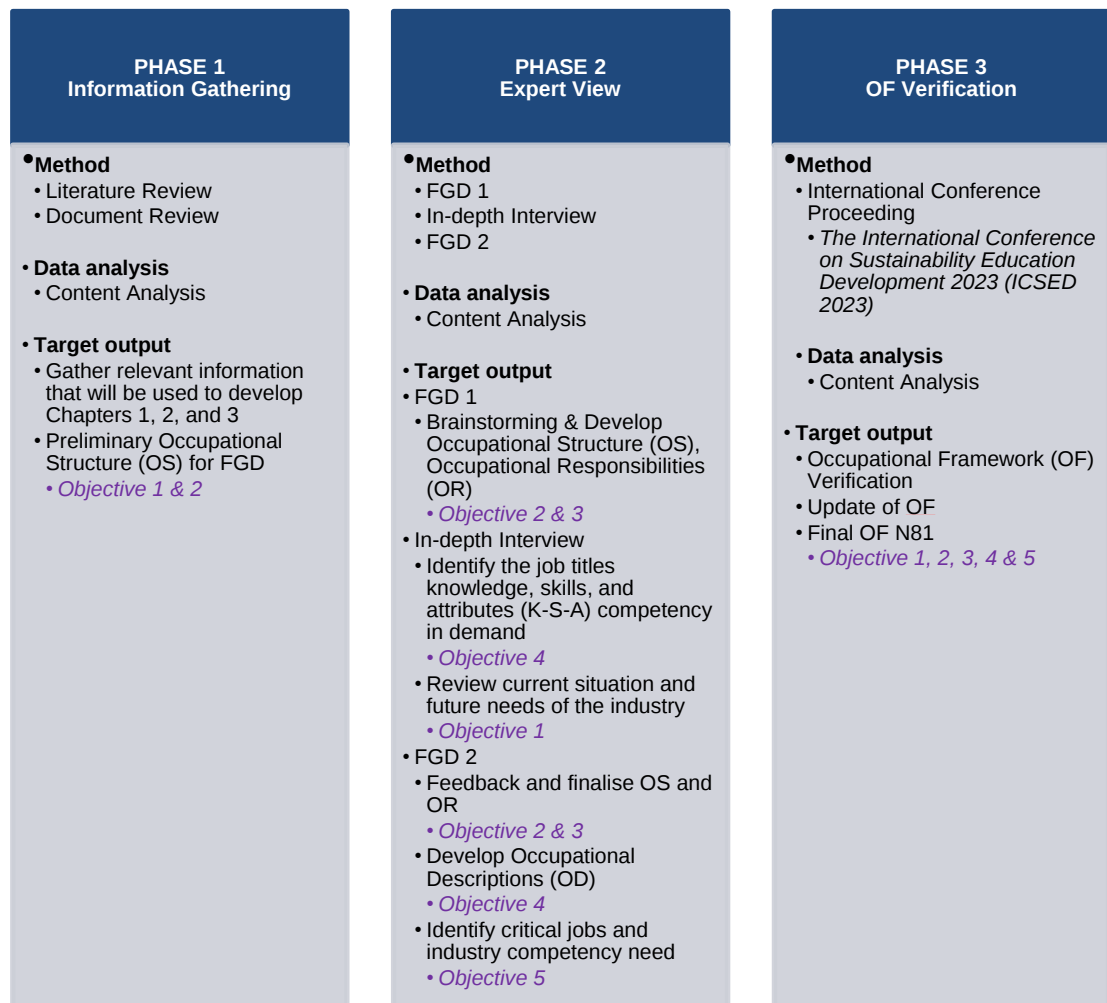


Figure 3.1 Phases of Research Methodology - DDR methodology

A research approach is the procedure selected by the researcher to collect, analyse, and interpret data. The content analysis method used in analysing and making sense of the data. The DDR methodology involves comprising of 3 phases: a) Phase 1 - Information Gathering; b) Phase 2 – Expert View, and c) Phase 3 – OF Verification, shown in Figure 3.1.

Phase 1: Information Gathering

Phase 1 involves information gathering, which includes three main tasks. The task is to conduct a document review to gather relevant information that will be used to develop Chapters 1, 2, and 3 of this research. This may include reviewing academic literature, reports, and other sources of information related to the research topic. Document review is a systematic approach to studying literature and documents on a research topic, where researchers extract and assess relevant information for accuracy and reliability. This step helps identify gaps in existing research, providing a foundation for the study. Identifying the research problem in this phase requires a review of literature and defining the research question to ensure that it is focused and relevant. It is critical to articulate the research problem clearly for a well-designed and executed study. Phase 1 is a crucial step in the research process as it lays the foundation to ensure that the study is built on a solid base of relevant and accurate information.

Phase 2: Expert View

The main task in Phase 2 is to conduct FGD and in-depth interview with industry experts. The selected industry experts hold a managerial level from the services to buildings and landscape activities industry. They were selected to represent the three areas in Division 81 industry with almost similar in experience and occupation. The researcher will be the moderator in FGD session to ensure group thinking or if there is one or two persons dominating the discussion.

FGD 1 was conducted from 19th to 20th August 2023 (FGD1) at Dorsett Putrajaya. The objective of the FGD 1 was to develop OS and OR framework for each group in N81. The develop framework from FGD will be reviewed and verified in subsequent in-depth interview. An assistant researcher will assist the researcher to take notes during the group discussion. A draft copy of the report will be given to the members for verification as soon as the discussion session ends.

Subsequently after the FGD 1, an in-depth interview will be conducted with representatives from the industry to seek feedback on the proposed framework, including its relevance, comprehensiveness, and applicability to their respective sectors. The researcher will gather insights on the strengths and weaknesses of the framework and identify areas for improvement. The feedback from industry representatives will be used to refine and finalize the occupational framework, ensuring that it accurately reflects the skills and competencies required for N81 services to buildings and landscape activities industry. Ultimately, the research goal is to create a framework that is practical, useful, and relevant to industry stakeholders, and we believe that the insights gained from industry engagement will be critical to achieving this objective.

During FGD 2, the fourteen (14) industry experts were invited to review and finalised the developed OS and OR from FGD 1 and in-depth interviews. The session continues to brainstorm and develop OD. Finally, the session to identify critical jobs titles and industry competency needs was held. The FGD 2 conducted on 14th October 2023 at Dorsett Hotel, Putrajaya.

Phase 3: OF Verification

The third phase of this research project focuses on verify the develop OF Framework by presenting it on international conference proceeding. The component of OF framework that comprise of OS, OR, OD and critical jobs title will be presented in International Conference on Sustainability Education Development 2023 (ICSSED 2023) that held in University Malaya on 25th to 26th October 2023. The feedback from the proceeding will further update and finalise the OF framework.

3.3 Data Collection

Creswell (2007) suggested a series of data collection activities and procedures, as illustrated in Figure 3.2. The activities start with locating expert individual or

organisation to study, followed by gaining access to and establishing rapport with the participants so that they will provide good data. This is where the purposive sampling step comes into the picture. Snowball sampling will be added to the method via subject recommendations. The next step will be deciding the most appropriate and feasible methods for collecting data. For this research, initial data collection was conducted through document review, followed by FGD and in-depth interview. The process suggests the need for anticipating issues in data collection and finally deciding the data storage method.

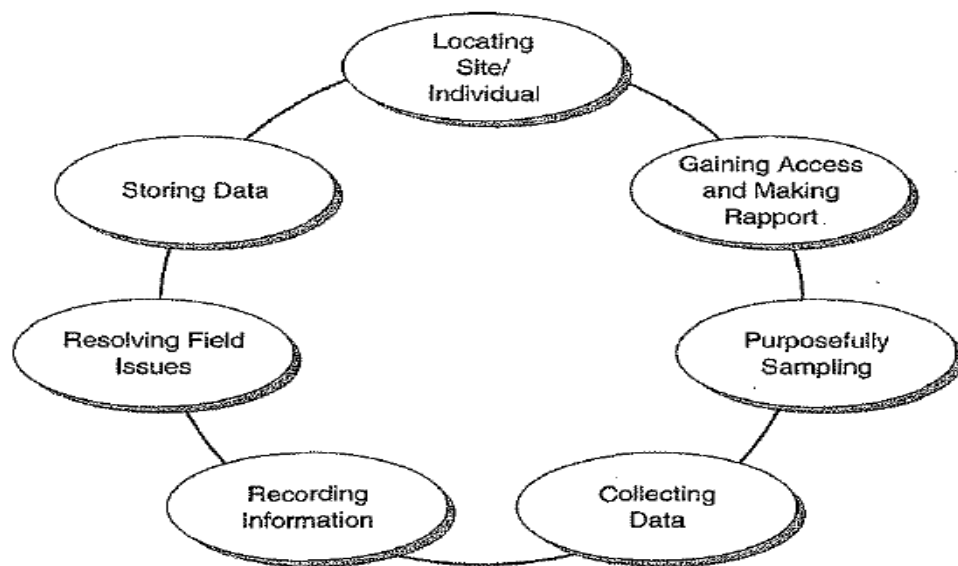


Figure 3.2 Fieldwork Data Collection Activities
Source: Creswell (2007, p. 118)

3.3.1 Document Review

Document review is a way of collecting data by reviewing existing documents. The documents may be internal to the organization or may be external. Documents may be hard copy or electronic and may include reports, program logs, performance ratings, funding proposals, meeting minutes, newsletters, and marketing materials. This strategy requires a thorough examination of current literature, papers, and documents that address the objectives of the study. In order to gain a deeper understanding of the

business and fulfil the research goals, the researcher conducts a systematic search that includes not only looking at the work of other researchers but also professional trade reports, the internet, and articles. This strategy will also give a general overview of the sector pertinent to IR and technology requirements and industry demands. Documents are ready-made sources of data that are easily accessible to the imaginative and resourceful researcher (Merriam, 2009). Documentary evidence acts as a method for cross-validating the information gathered from interviews and observations (Yin, 2016). It also provides information and guidelines in assisting the researcher's inquiry during the interview sessions. The two methods for collecting project document data productively are briefly explained below:

First, the researcher should obtain an initial idea of the full array of documents to be collected in accordance with the research scope and review the difficulty to access and retrieve the documents. This step is to decide the quantity and the specific documents needed to avoid unwanted bias.

Second, after collecting some preliminary documents, the researcher should immediately review the documents' data to fit the research scope. Selected documents should be stored and analysed later. This is to reduce the time taken to review the documents that are irrelevant to the research's scope.

The targeted output for document review is to gather relevant information in the relationship between previous studies with current and future industrial needs. The document review also carried out to develop a preliminary OS based on existing OA and NOSS that will be reference information during FGD session forward.

3.3.2 Focus Group Discussion (FGD)

According to Merriam (2009), a FGD is an interview on a topic with a group of people who have knowledge of the topic. Patton (2002, p. 392) explains, "*unlike a series of*

one-on-one interviews, in a focus group, participants get to hear each other's responses and to make additional comments beyond their own original responses as they hear what other people have to say". FGD are facilitated discussions, held with a small group of people who have specialist knowledge or interest in a particular topic. FGD is frequently used as a qualitative approach to gain an in-depth understanding of social issues. The method aims to obtain data from a purposely selected group of individuals rather than from a statistically representative sample of a broader population. FGD is a commonly used method. FGD is a technique where a researcher assembles a group of individuals to discuss a specific topic, aiming to draw from the complex personal experiences, beliefs, perceptions and attitudes of the participants through a moderated interaction.

In this research two FGD sessions was conducted to understand the context of various industries from the experience of the experts involved in the Services To Buildings And Landscape Activities sector. FGD 1 was conducted from 19th to 20th August 2023 and FGD2 was conducted on 14th October 2023, both at Dorsett Hotel, Putrajaya. The chosen stakeholder's panels criteria in FGD for developing occupational framework should meet the following criteria:

1. An individual with the role of a manager and decision maker for N81 industry scope
2. An individual with a N81 industry background and is attached with a N81 industry environment organisation.
3. An individual with more than 10 years of experience in the N81 industry planning and operation
4. At least one (1) representative from each division 811, 812 and 813 following organisation entity; a) government authority / governing professional bodies, b) industry player (contractor / consultant), and c) academic / research.

The objectives of FGD 1 are to understand the OS and occupational responsibility (OR) for N81 groups. The details result and explanation of the OS are discussed in Chapter 4. In this FGD 1 session, fourteen (14) industry experts attended as per list tabulated in Table 3.1 and some photos of the session are shown in Figure 3.3.

Table 3.1 List of experts for FGD 1

No.	Name	Designation	Organisation / Company / Agency	Representing Group N81 Services To Buildings And Landscape Activities Sector
1	Amir Farid Omar	Managing Director	AFD Facilities Resources	N811 Combined facilities support activities
2	Mohd Zulakhmar Zakiyudin	Pensyarah Kanan	Universiti Teknologi MARA	N811 Combined facilities support activities
3	Ir. Saparudin Lolong	Jurutera Elektrik Penguasa	Jabatan Kerja Raya	N811 Combined facilities support activities
4	Ts Dr Saharani Jaafar	Pengarah	SRS Knowledge Fusion Sdn Bhd	N811 Combined facilities support activities
5	Noruddin Haji Idris	President / Managing Director	Persatuan Kontraktor Perkhidmatan Pencucian Malaysia (MACC) / Q-Services Sdn. Bhd.	N812 Cleaning activities
6	Azizah Man	Secretary / Managing Director	Persatuan Kontraktor Perkhidmatan Pencucian Malaysia (MACC) / Khidmat Bersih Sdn. Bhd.	N812 Cleaning activities
7	Hj Faizal Rahim Hj Moidunny	Timbalan Pengarah Urusan	Harta Maintenance Sdn Bhd	N812 Cleaning activities
8	Nik Husin Nik Yusoff	Pengurus Besar	Exclusive Pillar (M) Sdn Bhd	N812 Cleaning activities
9	Syed Mohd Jala Loi Lail	Senior Manager, Adminitration	Sinar Global Academy Sdn. Bhd.	N812 Cleaning activities
10	Prof Madya LAr Dr Suhardi Maulan	Prof Madya	Jabatan Senibina Landskap, Fakulti Rekabentuk dan Senibina, UPM	N813 Landscape care and maintenance service activities
11	Zainuddin Daud	Facilities Management Trainer	Equal Trade	N813 Landscape care and maintenance service activities

No.	Name	Designation	Organisation / Company / Agency	Representing Group N81 Services To Buildings And Landscape Activities Sector
12	Ts. Emran @ Zahrin Mohamad Taram	Pensyarah Kanan	Jabatan Senibina Landskap, Fakulti Rekabentuk dan Senibina, UPM	N813 Landscape care and maintenance service activities
13	Rozita Awang	Arkitek Landskap	Majlis Perbandaran Kulim	N813 Landscape care and maintenance service activities
14	Siti Sarah Khairul Aziz	Managing Director	Siti Sarah Resources	N813 Landscape care and maintenance service activities



Figure 3.3 FGD 1 sessions with N811, N812 and N813 industry experts

Prior to the FGD 2 session, each expert given a checklist questionnaire in a Google Form format to be answer. The checklist contains a question on identification of the knowledge, skills, and attributes (KSA) competency in demand of each job titles identified. The checklist also contains a question to identify critical job and jobs in demand from the list of jobs titles obtained from FGD 1. The expert response from the checklist questionnaire analysed using content analysis method and the summary finding presented during FGD 2 session for discussion and to obtain consensus.

FGD 2 was conducted on 14th October 2023 at Dorsett Hotel, Putrajaya and was attended by 13 experts from all industry groups for N81. The objectives of the FGD 2 are to finalize the draft OS and occupational responsibility (OR) developed during FGD 1. This session also discussed of jobs in demand, critical jobs and OD for each job titles. All the objectives in FGD 2 are managed to be completed during the session. Details explanation and result of the outcome of FGD 2 are discussed in chapter 4. The list of experts that involved in FGD 2 is shown as in Table 3.2 and some photos during the session are presented in Figure 3.4.

Table 3.2 List of experts for FGD 2

No.	Name	Designation	Organisation / Company / Agency	Representing Group N81 Services To Buildings And Landscape Activities Sector
1	Assoc. Prof. Dr. Siti Aida Bt Samikon	Dean Limkokwing Graduate School	Limkokwing University of Creative Technology	N811 Combined facilities support activities
2	Amir Farid Omar	Managing Director	AFD Facilities Resources	N811 Combined facilities support activities
3	Mohd Zulakhmar Zakiyudin	Pensyarah Kanan	Universiti Teknologi MARA	N811 Combined facilities support activities
4	Ts Dr Saharani Jaafar	Pengarah	SRS Knowledge Fusion Sdn Bhd	N811 Combined facilities support activities
5	Noruddin Haji Idris	President / Managing Director	Persatuan Kontraktor Perkhidmatan Pencucian Malaysia (MACC) / Q-Services Sdn. Bhd.	N812 Cleaning activities

No.	Name	Designation	Organisation / Company / Agency	Representing Group N81 Services To Buildings And Landscape Activities Sector
6	Hj Faizal Rahim Hj Moidunny	Timbalan Pengarah Urusan	Harta Maintenance Sdn Bhd	N812 Cleaning activities
7	Nik Husin Nik Yusoff	Pengurus Besar	Exclusive Pillar (M) Sdn Bhd	N812 Cleaning activities
8	Syed Mohd Jala Loi Lail	Senior Manager, Adminitration	Sinar Global Academy Sdn. Bhd.	N812 Cleaning activities
9	Prof Madya LAr Dr Suhardi Maulan	Prof Madya	Jabatan Senibina Landskap, Fakulti Rekabentuk dan Senibina, UPM	N813 Landscape care and maintenance service activities
10	Zainuddin Daud	Facilities Management Trainer	Equal Trade	N813 Landscape care and maintenance service activities
11	Ts. Emran @ Zahrin Mohamad Taram	Pensyarah Kanan	Jabatan Senibina Landskap, Fakulti Rekabentuk dan Senibina, UPM	N813 Landscape care and maintenance service activities
12	Rozita Awang	Arkitek Landskap	Majlis Perbandaran Kulim	N813 Landscape care and maintenance service activities
13	Siti Sarah Khairul Aziz	Managing Director	Siti Sarah Resources	N813 Landscape care and maintenance service activities



Figure 3.4 FGD 2 sessions with N811, N812 and N813 industry experts

3.3.3 In-depth Interviews

According to Rapley (2001, p. 317), an interview is “*an economical means of getting access to topics and to get people to think-out-loud about the topics discussed*”. The interview method is considered as an appropriate instrument for this research as it consists “*a great deal of freedom to probe various areas and to raise specific queries*” (Naoum, 2006, p. 58) about the studied subject. An interview is a social interaction,

thus the researcher needs to mediate the relationship with the interviewees (Stephens, 2007).

This research employed an expert interview methodology and technique by Christmann (2009) and (Bogner et al., 2009). According to Christmann (2009, p. 9) an expert interview involves interactions between an interviewer and an interviewed person to seek information from “*a person’s special knowledge and experiences which result from the actions, responsibilities, obligations of the specific functional status within an organisation*”. The research’s research questions focus on the development of occupational framework for N81 services to buildings and landscape activities industry, hence interviews were conducted with building and landscape manager as experts that are responsible for planning, implementing, or controlling a solution and as decision makers over processes and people (Bogner et al., 2009).

All the interviews were scheduled in advance to allow the potential interviewees to prepare useful information before the interview. According to Stephens (2007), this approach provides contextual awareness and increases enthusiasm during the interview. Face-to-face in-depth interviews were carried out with the personnel who were directly involved in projects. Sekaran (2016) affirmed that the interviewer has an option to rephrase a question that is not understood by the interviewee. Hence, the choice of face-to-face interviews were influenced by the large number of participants from different projects. Moreover, the information to be collected was anticipated to be diverse, as the interview methodology depends very much on the type of information to be collected (Merriam, 2009).

Semi-structured interviews were conducted to enable the interviewees to provide their own answers and opinions to the questions. Interviews were used as a follow-up procedure to further investigate the responses to the interview (McNamara, 2017). Semi-structured interviews allow for a certain level of flexibility, where

additional questions are required to clarify issues or to explore more, given the nature of a particular event within a particular organisation.

Researchers usually have a list of themes and questions to be covered, although the questions may vary from an interview to another interview (Quinlan, 2012). All the interviewees were asked standardised open-ended questions, which were sent to them in advance by email. Open-ended questions were used as a guide in the interview to focus the interview content more effectively, while still allowing a degree of freedom and adaptability in obtaining information (McNamara, 2017). Interview questions were in the form of an “*aide-memoire*” and used as an interview guide to deal with topics. The interviewees had a great deal of leeway and were allowed to respond freely (Quinlan, 2012). The “*aide-memoire*” was designed according to the factors drawn from the literature review.

The chosen interviewees criteria in in-depth interview for the framework verification and usability should meet the following criteria:

1. An individual with the role of a decision maker for N81 industry scope organisation
2. An individual with a N81 industry background and is attached with a N81 industry related organisation.
3. An individual with more than 10 years of experience in the N81 industry planning and operation
4. At least one (1) representative of N81 industry organisation entity following; a) government authority / governing professional bodies, b) industry player (contractor / consultant), and c) academic / research.

In total, eight (8) in-depth interviews were conducted between August 2023 to November 2023 either at the interviewees’ office or online. The objectives of the in-depth interview are to identify the relationship between previous studies with current

and future industrial needs. This session also discussed the job titles, KSA, and competency in demand. Some in-depth interview session ended with site visit to observe the services works to buildings and landscape activities been carried out. All the objectives in in-depth interview were managed to be completed during the session. Details explanation and result of the outcome of in-depth interview are discussed in chapter 4. The list of experts involved in in-depth interview is shown as in Table 3.3 and some photos during the session are presented in Figure 3.5.

Table 3.3 List of interviewees for in-depth interview

No.	Name	Designation	Organisation / Company / Agency	Representing Group N81 Services To Buildings And Landscape Activities Sector
1	Mohd Sopian Mohd Zin	Ketua Bahagian Pengurusan Aset Zon Akademik	Universiti Putra Malaysia	N811 Combined facilities support activities
2	Chandran Thambiraja	Director	RC Construction Sdn. Bhd.	N811 Combined facilities support activities
3	Shahirah binti Shariman	Project Planning & Operation Senior Executive	Sime Darby Property Berhad	N811 Combined facilities support activities
4.	Muhammad bin Bahauddin	Pembantu Operasi	Universiti Putra Malaysia	N812 Cleaning activities
5	Tony Clifford	Chief Executive Officer	Suria Mentari Cleaning Services Sdn.Bhd	N812 Cleaning activities
6	Ahmad Affendi Md Yusop	Pegawai pertanian	Universiti Putra Malaysia	N813 Landscape care and maintenance service activities
7	Rozita Awang	Arkitek Landskap	Majlis Perbandaran Kulim	N813 Landscape care and maintenance service activities
8	Mohd Syukri bin Yusof	Senior Executive, Landscape	Sime Darby Property Berhad	N813 Landscape care and maintenance service activities

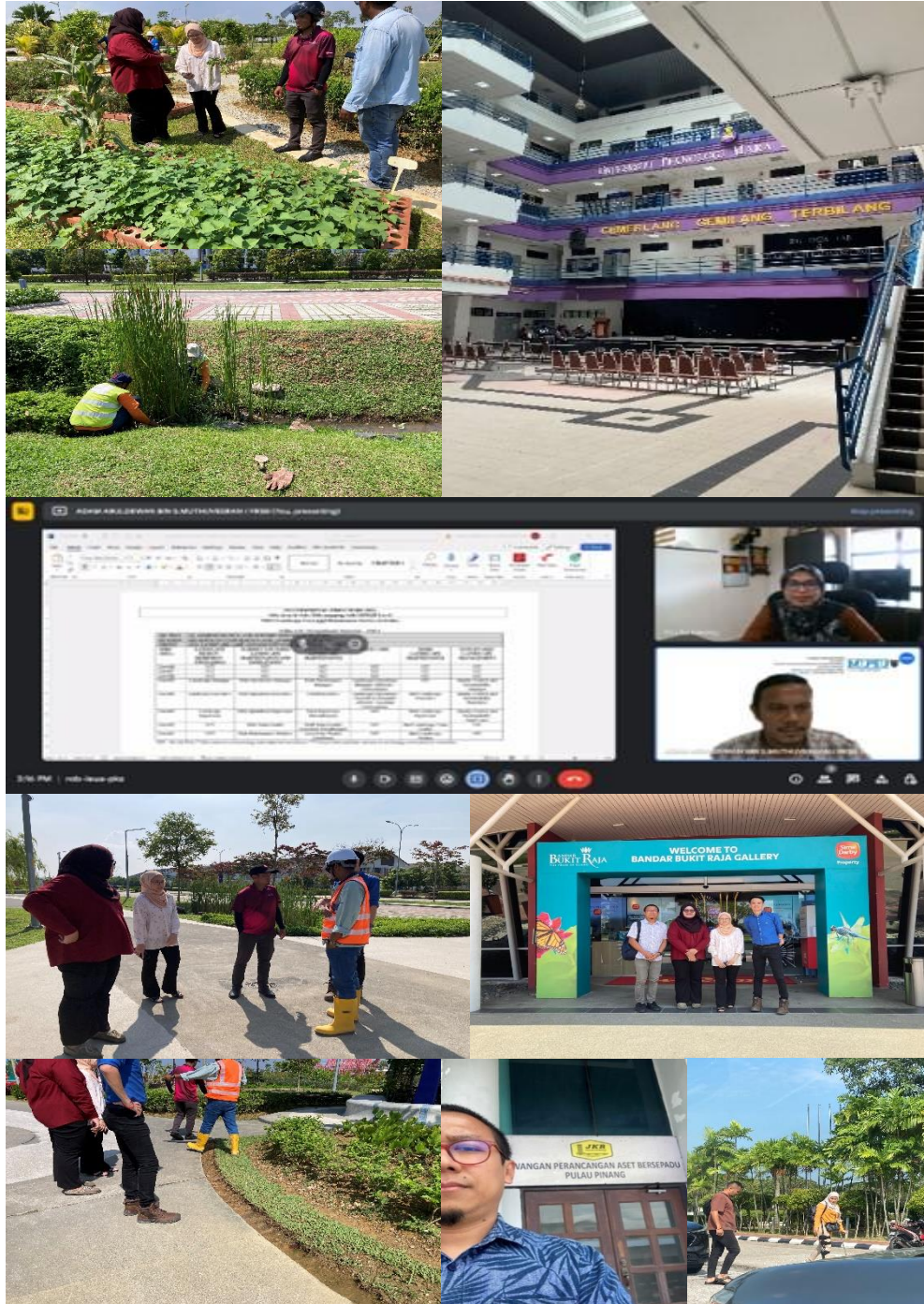


Figure 3.5 In-depth interview sessions with N811, N812 and N813 industry experts

3.4 Data Analysis

According to Merriam (2009), qualitative data are attractive as they are rich, full, earthy, holistic, and real; their face validity seems flawless; they preserve the chronological flow; they experience minimum retrospective distortion; and they offer a precise way to assess causality in organisational affairs. However, Schönfelder, (2011) argued that qualitative data are messy and tend to grow rapidly from a few pages of interview transcripts or field notes into a huge pile of information. Therefore, there will be different conclusions drawn from the data analysis, depending on the methodological framework used (Wong, 2008).

Analysing qualitative data will allow the researcher to organise and categorise according to patterns (Auld et al., 2007). It acts as a means to manage the data (Schönfelder, 2011) in ensuring that the relevant phenomena are analysed to find commonalities. The objectives of analysing qualitative data are to determine the categories, relationships, and assumptions based on the interviewee's view of the world and to deconstruct blocks of data through fragmentation and combine them into related categories (Jones, 2007). Wong (2008) discussed the process flow for qualitative data analysis, as depicted in Figure 3.6.

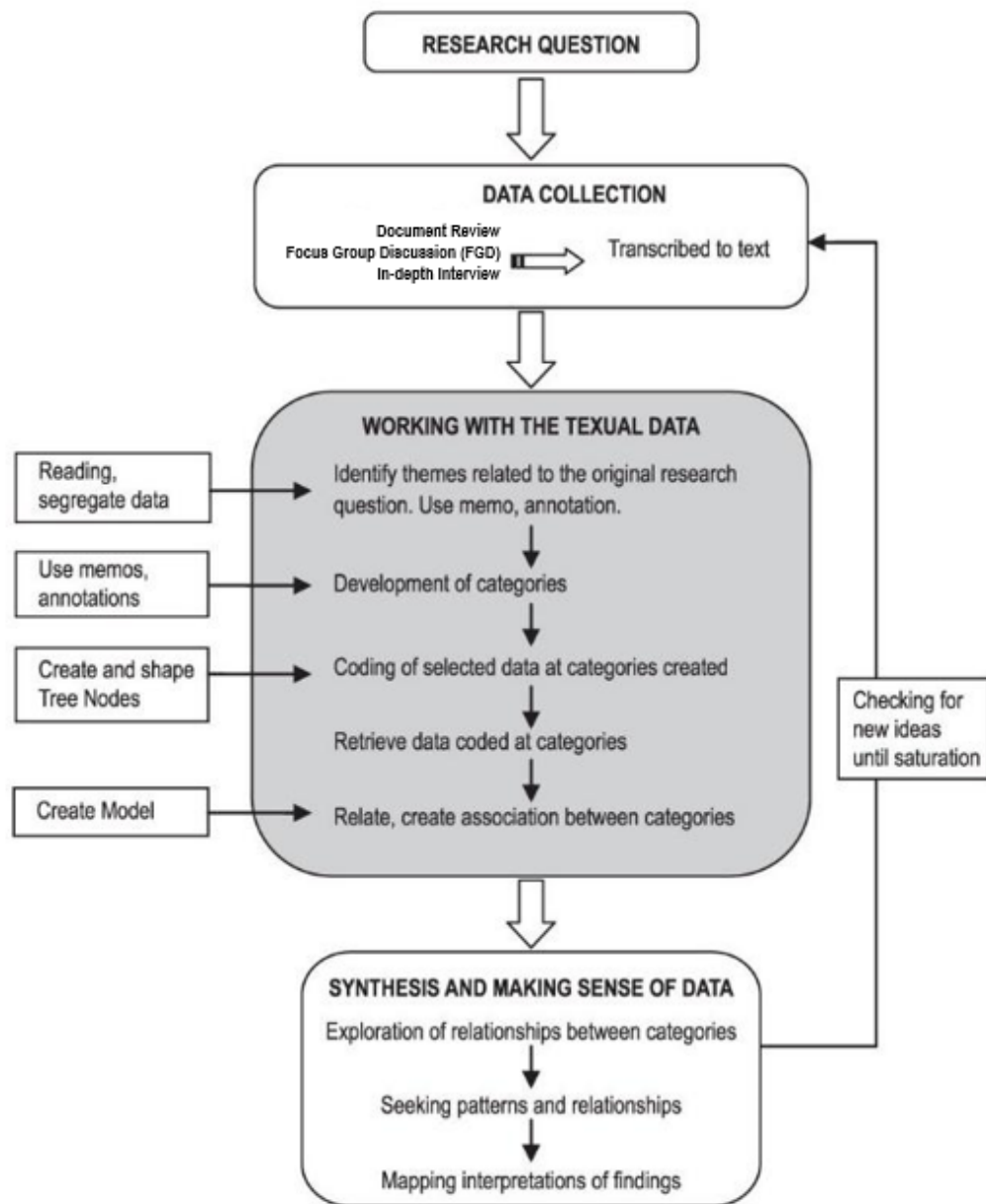


Figure 3.6 Qualitative Data Analysis Flowchart
Adapted from Wong (2008, p. 15)

This research employed content analysis method in analysing data. This is to suit the exploratory nature of the research to explore phenomena that may have little or no theoretical literature to back up (D. Cooper & Schindler, 2014). In addition, the

‘constructionism’ version of studying qualitative data (Silverman, 2015, p. 87) was employed to construct the research theme in understanding the phenomena being studied.

Content analysis was defined by Hsieh & Shannon (2005, p. 1278) as “*a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns*”. (Mayring, 2014, p. 2) defined it as “*an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification*”. Meanwhile, Patton (2002) defined it as “*any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings*”.

Content analysis is used as a research tool by social scientists in making inferences. It is cost effective and provides a means for studying processes over a long period of time (Merriam, 2009). As one of today’s most extensively employed analytical tools, content analysis has been used fruitfully in various research applications in information and library science. According to Krippendorff (2004), content analysis is a research technique for making replicable and valid inferences from texts to the contexts of their use. It is used to determine the presence of certain words or concepts within texts or sets of texts. Content analysis is a valuable alternative to more traditional quantitative content analysis, when the researcher is working in an interpretive paradigm. The goal is to identify important themes or categories within a body of content, and to provide a rich description of the social reality created by those themes/categories as they are lived out in a particular setting. Through careful data preparation, coding, and interpretation, the results of qualitative content analysis can support the development of new theories and models, as well as

validating existing theories and providing thick descriptions of particular settings or phenomena (Zhang et al., 2009).

Qualitative content analysis can be used to analyse various types of data, but generally the data need to be transformed into written texts before starting the analysis. Qualitative content analysis is most often used to analyse the collected data transcripts to reveal or model people's information-related behaviours and thoughts (Zhang & Barbara, 2009).

3.5 Conclusion

The justification of the chosen research methodology and data collection method (document review, FGD and in-depth interviews) was covered in this section. Document review was chosen because it can provide details about the setting in which research participants operate and can be used to support or contradict evidence from other sources. FGD are used in this research since they are a quick and effective technique to learn information while also generating new ideas through free discussion among the respondents. Finally, in-depth interviews were used to which aims to refine, verify and test the usability of the proposed occupational framework. The findings on the Occupational Structure, Occupational Responsibilities and Description and competency in demand as identified by the FGD and in-depth interview are presented in the next chapter, Chapter 4 Findings.

CHAPTER 4

FINDINGS

4.1 Introduction

This chapter presents the research findings based on the data collected from document review, FGD and in-depth interview with subject matter experts. The findings are presented according to the objectives of this study, as described in Chapter 1.

The first objective is to establish OS by examine job areas, job titles and relevant competency level. The third and fourth objectives are to determine OR that outline the main work activities and to determine OD for each job titles based on the proposed OS. Then this research will also to identify the jobs in demand, critical jobs titles and emerging skills to address demand and supply in industry. Lastly, the research to relate IR technology relevancy and impact towards jobs titles for the industry future advancement.

4.2 Occupational Structure (OS)

OS refers to the aggregate distribution of occupations in society, defined by skill level, economic function, or social rank.

Based on the FGD with the experts' representative from every industry related to N81 group, OS for each group of N811, N812 and N813 have been successfully developed. Table 4.1 summarize the overall number of job titles in N81 group. 20 job areas managed to be listed during the FGD, with 92 overall job titles were identified within the N81 Services To Buildings And Landscape Activities.

Table 4.1 Overall Job Areas and Titles in N81 Services To Buildings And Landscape Activities

Occupational Structure (OS)	Total Identified Job Areas	Total Identified Job Titles
Group 811: Combined Facilities Support Activities	4	18
Group 812: Cleaning Activities	10	52
Group 813: Landscape Care And Maintenance Service Activities	6	22
TOTAL	20	92

Combined Facilities Support Activities (N811) contains 4 major job areas that are essential and important to the Services To Buildings And Landscape Activities. The explanation of the job areas is as follows:

- 1) Civil & Structure (C&S) - the facilities civil and structure is responsible for the inspection, maintenance, and repair of civil engineering and structural components within the facility, ensuring their structural integrity and compliance with safety standards.
- 2) Mechanical - the facilities mechanical is responsible for maintaining and servicing mechanical systems within the facility, ensuring they operate efficiently, safely, and in compliance with relevant SOP.
- 3) Electrical - the facilities electrical is responsible for maintaining and servicing electrical systems and equipment within the facility, ensuring they operate efficiently, safely, and in compliance with electrical SOP and regulations.
- 4) Plumbing - the facilities plumbing is responsible for maintaining and servicing plumbing systems and equipment within the facility, ensuring they operate efficiently, safely, and in compliance with SOP and regulations.

Cleaning Activities (N812) contains 10 major job areas that are essential and important to the Services To Buildings And Landscape Activities. The explanation of the job areas is as follows:

- 1) General Cleaning Of Buildings – cleaning activities of interior and exterior (less than 3m) cleaning of buildings, which include office cleaning, toilet cleaning, floor maintenance, wall and ceiling cleaning, interior and exterior carpark and compound of a building. Buildings can be office building, shopping complexes, malls, schools, institutions of higher learnings factories and other commercial buildings.
- 2) Public Cleaning - cleaning activities for public roads, public toilets, public drains, hawker centres (not including privately owned and operated markets), solid waste controlled illegally dumped on public roads and in places public, beach cleaning, grass cutting on public roads, grass cutting in public places and removal of carcasses but excluding landscaping and maintenance of public roads and public places.
- 3) Transportation Cleaning - cleaning activities for vehicles including motor vehicles, trains, ships and plane
- 4) Marine And River Cleaning - cleaning activities for rivers, river beds, and oil spillage.
- 5) Health Care Cleaning - cleaning activities for health care institutions such as hospitals, clinics and quarantine centres.
- 6) Kitchen Cleaning - cleaning activities for food preparations premise and commercial kitchen,
- 7) Oil & Gas Cleaning - cleaning activities for oil and gas industry which includes onshore and offshore especially cleaning activities on top oil platform and cleaning under the platform water jacket.
- 8) Heritage Cleaning - cleaning activities for heritage sites, heritage structures and heritage objects, which have archaeological, palaeontological, historical, architectural, religion, culture and aesthetics values.
- 9) External High Rise Building Cleaning - cleaning activities for exterior facade of building above 3 meters using scaffolding or other high rise access equipment's.

10) *Sertu Services* - cleaning process which involved syariah (Islamic) compliance

Landscape Care And Maintenance Service Activities (N813) contains 6 major job areas that are essential and important to the Services To Buildings And Landscape Activities. The explanation of the job areas is as follows:

- 1) Landscape Design / Redesign / Upgrading - establish the needs, perform area survey, identify design needs, record challenges and propose solution, engage with clients to identify needs and concerns, prepare and present design drawings, communicate with local authorities, perform submission for approval as necessary, monitor the implementation on site, report progress to client, monitor subcontract works, make recommendation on site adjustment.
- 2) Garden, Park And Landscape Operations And Maintenance - establish and monitor maintenance programme, maintain gardens, parks and other outdoor landscapes, ensuring good plant growth, maintain effectiveness through standard maintenance practises, adhere to maintenance programme cleaning outdoor facilities, monitor vendor works and performance indicators, report daily activities, monitor level of compliance to standard operating procedures
- 3) Landscape Turf Maintenance - establish and monitor maintenance programme, Maintain turf course and greens, ensure all landscape elements are maintain to maintenance schedule, ensuring good landscape establishment, attaining good growth, maintain effectiveness through standard turf course maintenance practises, adhere to maintenance, cleaning outdoor facilities, monitor vendor works and performance indicators, report daily activities, monitor level of compliance to standard operating procedures
- 4) Tree Care - establish and monitor maintenance programme, Maintain records on tree establishment, ensure all tree growth requirements are maintain to its maintenance schedule, ensuring tree maintenance programme are followed for trees to attain good growth, maintain effectiveness of maintenance through systematic records, perform periodic inspection on pest, disease or any

abnormality, monitor vendor works and performance indicators, report daily activities, monitor level of compliance to standard operating procedures

- 5) Hardscape Maintenance - establish and monitor maintenance programme, maintain records on hardscape maintenance activities, ensure all requirements are performed to its maintenance schedule, monitor and ensure repairs are performed as scheduled, keep systematic and effective maintenance record, perform periodic inspection on defects and monitor vendor works and performance indicators, report daily activities, monitor level of compliance to standard operating procedures
- 6) Sustainable Landscape Management - perform inspection and ensure compliance to procedures, measure the level of compliance of maintenance programme, measure compliance of performance indicators, review and update records and reports, perform periodic assessments, engage with users on continual improvement process, and Maintain records on quality assurance and quality control, ensure objective are set for landscape activities, keep systematic and effective maintenance record and benchmark the compliance of standard operating procedures

The OS of each group is tabulated, presented, and summarised from Table 4.6 to Table 4.8, which present the overall job areas and job title. Table 4.22 is the OS for N811, Table 4.3 and 4.4 and Table 4.5 is the OS for N812, and Table 4.zz is the OS for N813. Table 4.a, Table 4.b and Table 4.c is the summary of Job Level for each Job Area N81, N812 and N813. The summary table reported that there are 4 job areas identified and a total of 18 job titles for N811, 10 job areas identified and a total of 52 job titles for N812, and 6 job areas identified and a total of 22 job titles for N813.

Table 4.2 Occupational Structure – N811

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES			
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES			
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES			
JOBS AREA	CIVIL & STRUCTURE (C&S) SERVICE	MECHANICAL SERVICE	ELECTRICAL SERVICE	PLUMBING SERVICE
LEVEL 8	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT
LEVEL 5	Facility Management Manager C&S***	Facility Management Manager Mechanical***	Facility Management Manager Electrical***	Facility Management Manager Plumbing***
LEVEL 4	Facility Management Executive C&S***	Facility Management Executive Mechanical***	Facility Management Executive Electrical***	Facility Management Executive Plumbing***
LEVEL 3	Facility Supervisor C&S*	Facility Supervisor Mechanical***	Facility Supervisor Electrical***	Facility Supervisor Plumbing***
LEVEL 2	Facility Technician C&S***	Facility Technician Mechanical***	Facility Technician Electrical***	Facility Technician Plumbing***
LEVEL 1	Facility Handyman C&S***	NJT	NJT	Plumbing Handyman***

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.3 Occupational Structure – N812 (1 / 2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES				
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES				
GROUP	(812) CLEANING ACTIVITIES				
JOBS AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Building Cleaning Manager	Public Cleaning Manager	Transportation Cleaning Manager	Marine And River Cleaning Manager	Building Cleaning Manager**
LEVEL 4	Building Cleaning Executive	Public Cleaning Executive	Transportation Cleaning Executive	Marine And River Cleaning Executive	Building Cleaning Executive
LEVEL 3	Building Cleaning Supervisor***	Public Cleaning Supervisor***	Transport Cleaning Supervisor***	Marine And River Cleaning Supervisor*	Hospital Cleaning Supervisor***
	Building Cleaning Technician***	Public Cleaning Technician***	Transport Cleaning Technician*	Marine And River Cleaning Technician***	Hospital Cleaning Technician***
LEVEL 2	Building Cleaning Team Leader***	Public Cleaning Team Leader***	Transport Cleaning Team Leader***	Marine And River Cleaning Team Leader***	Hospital Cleaning Team Leader***
LEVEL 1	Building Cleaning Operator***	Public Cleaning Operator***	Transport Cleaning Operator***	Marine And River Cleaning Operator***	Hospital Cleaning Operator***

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.4 Occupational Structure – N812 (2 / 2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES				
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES				
GROUP	(812) CLEANING ACTIVITIES				
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	SERTU SERVICES
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Kitchen Cleaning Manager	Oil & Gas Cleaning Manager	Heritage Conservator**	Building Cleaning Manager**	Sertu Services Manager
LEVEL 4	Kitchen Cleaning Executive	Oil & Gas Cleaning Executive	Heritage Assistant Conservator**	Building Cleaning Executive**	Sertu Services Executive
LEVEL 3	Kitchen Cleaning Supervisor**	Oil & Gas Cleaning Supervisor**	Heritage Cleaning Supervisor**	External High Rise Building Cleaning Supervisor***	Sertu Services Supervisor
	Kitchen Cleaning Technician**	Oil & Gas Cleaning Technician**	Heritage Cleaning Technician***	External High Rise Building Cleaning Technician***	Sertu Services Technician**
LEVEL 2	Kitchen Cleaning Team Leader***	NJT	NJT	NJT	NJT
LEVEL 1	Kitchen Cleaning Operator***	NJT	NJT	NJT	NJT

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.5 Occupational Structure – N813

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES					
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES					
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES					
JOBS AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
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	Landscape Manager / Landscape Architect**	Landscape Operations Manager**	Field Maintenance Manager**	Landscape Operations Manager /Arborist / Horticulturist***	NJT	Quality Control and Sustainability Manager***
Level 4	Landscape Executive / Landscape Designer**	Landscape Operations Executive**	Field Executive***	Landscape Operations Executive /Assistant Arborist / Assistant Horticulturist***	Hardscape Executive**	Quality Control and Sustainability Executive***
Level 3	Design Coordinator***	Landscape Operations Supervisor**	Field Supervisor / Greenkeeper	NJT	Hardscape Supervisor**	Quality Control and Sustainability Supervisor***
Level 2	NJT	Maintenance Technician***	Field Team Leader / Assistant Greenkeeper***	NJT	Hardscape Technician / Maintenance Technician***	NJT
Level 1	NJT	Maintenance Worker*	Lawn Care Worker / Landscaper**	NJT	Hardscape Worker/ Maintenance Worker*	NJT

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.6 Summary of Job Titles in N811

JOBS AREA	JOB LEVEL							
	1	2	3	4	5	6	7	8
CIVIL & STRUCTURE (C&S) SERVICE	1	1	1	1	1	NJT	NJT	NJT
MECHANICAL SERVICE	NJT	1	1	1	1	NJT	NJT	NJT
ELECTRICAL SERVICE	NJT	1	1	1	1	NJT	NJT	NJT
PLUMBING SERVICE	1	1	1	1	1	NJT	NJT	NJT
IDENTIFIED JOB TITLES (PER LEVEL)	2	4	4	4	4	-	-	-
TOTAL IDENTIFIED JOB TITLE	18							

NJT – No Job Title

Table 4.7 Summary of Job Titles in N812

JOBS AREA	JOB LEVEL							
	1	2	3	4	5	6	7	8
GENERAL CLEANING OF BUILDINGS SERVICE	1	1	2	1	1	NJT	NJT	NJT
PUBLIC CLEANING SERVICE	1	1	2	1	1	NJT	NJT	NJT
TRANSPORTATION CLEANING SERVICE	1	1	2	1	1	NJT	NJT	NJT
MARINE AND RIVER CLEANING SERVICE	1	1	2	1	1	NJT	NJT	NJT
HEALTH CARE CLEANING SERVICE	1	1	2	1	1	NJT	NJT	NJT
KITCHEN CLEANING SERVICE	1	1	2	1	1	NJT	NJT	NJT
OIL & GAS CLEANING SERVICE	NJT	NJT	2	1	1	NJT	NJT	NJT
HERITAGE CLEANING SERVICE	NJT	NJT	2	1	1	NJT	NJT	NJT
EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	NJT	NJT	2	1	1	NJT	NJT	NJT
SERTU SERVICES	NJT	NJT	2	1	1	NJT	NJT	NJT
IDENTIFIED JOB TITLES (PER LEVEL)	6	6	20	10	10	-	-	-
TOTAL IDENTIFIED JOB TITLE	52							

NJT – No Job Title

Table 4.8 Summary of Job Titles in N813

JOBS AREA	JOB LEVEL							
	1	2	3	4	5	6	7	8
LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	NJT	NJT	1	1	1	NJT	NJT	NJT
GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	1	1	1	1	1	NJT	NJT	NJT
LANDSCAPE TURF MAINTENANCE SERVICE	1	1	1	1	1	NJT	NJT	NJT
TREE CARE SERVICE	NJT	NJT	NJT	1	1	NJT	NJT	NJT
HARDSCAPE MAINTENANCE SERVICE	1	1	1	1	NJT	NJT	NJT	NJT
SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE	NJT	NJT	1	1	1	NJT	NJT	NJT
IDENTIFIED JOB TITLES (PER LEVEL)	3	3	5	6	5	-	-	-
TOTAL IDENTIFIED JOB TITLE	22							

NJT – No Job Title

4.3 Occupational Responsibilities (OR)

Occupational responsibility (OR) is a duty or obligation to satisfactorily perform or complete a task (assigned by someone or created by one's own promise or circumstances) that one must achieve and for which failure has a penalty. In a nutshell, OR describes the primary scope of work for the job titles listed in the Occupational Structure (OS). It establishes an employee's accountability and responsibility. Employee accountability is the responsibility of employees to complete the tasks assigned to them, to perform the duties required by the job, and to be present at work in order to achieve the organization's goals.

In this section, the operational responsibilities (OR) for all job titles in the N81 industries will be described and discussed according to their respective job areas and levels. The job titles that are primarily responsible for the main functions within these industries will be explained in further detail.

The OR will serve as the future reference for the development of the NOSS for the Manufacture of Other Transport Equipment occupation under the MSIC 2008, Division N81. (Group: N811, N812 and N813). The OR for the job titles in this study are tabulated from Table 4.9 until Table 4.16.

Table 4.9 Occupational Responsibilities (OR) N811 (1/2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOBS AREA	CIVIL & STRUCTURE (C&S)	MECHANICAL SERVICE
LEVEL 8	No Job Title	No Job Title
LEVEL 7	No Job Title	No Job Title
LEVEL 6	No Job Title	No Job Title
LEVEL 5	Facility Management Manager C&S 1. O&M planning - to plan O&M policies and guidelines, verify O&M works, plan O&M operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty. 2. Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff. 3. Finance and business planning - to plan overall FM activity budget, prepare financial management planning (FMP), manage project profit and loss (P&L) and manage procurement method/approach. 4. Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop Business Continuity Plan (BCP) procedures. 5. Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations. 6. Human resource management - to prepare recruitment and employment requirements, perform training need analysis (TNA), establish training plan and prepare staff performance appraisal. 7. Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service performance level, coordinate change order management, and perform contract closure. 8. Quality control management - to prepare quality management plan (QMP), propose customer satisfaction survey improvements, perform	Facility Management Manager Mechanical 1. O&M planning - to plan O&M policies and guidelines, verify O&M works, plan O&M operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty. 2. Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff. 3. Finance and business planning - to plan overall FM activity budget, prepare FMP, manage project P&L and manage procurement method/approach. 4. Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures. 5. Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations. 6. Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal. 7. Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service performance level, coordinate change order management, and perform contract closure. 8. Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOB AREA	CIVIL & STRUCTURE (C&S)	MECHANICAL SERVICE
	statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report. 9. Project management - to prepare project management plan (PMP), assign project team members and perform project monitoring and control. 10. Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity	planning, perform vendor and service provider assessment, and verify sign off project report. 9. Project management - to prepare PMP, assign project team members and perform project monitoring and control. Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity
LEVEL 4	<u>Facility Management Executive C&S</u> 1. O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage O&M technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity. 2. Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork. 3. Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule. 4. Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report. 5. Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report. 6. Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level.	<u>Facility Management Executive Mechanical</u> 1. O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage O&M technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity. 2. Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork. 3. Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule. 4. Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report. 5. Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report. 6. Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOB AREA	CIVIL & STRUCTURE (C&S)	MECHANICAL SERVICE
	7. Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan. 8. Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.	7. Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan. Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.
LEVEL 3	Facility Supervisor C&S 1. Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for C&S works, giving instructions and technical assistance. 2. O&M: a) Overseeing the C&S repair work to ensure the completion of work; b) Verify C&S work order and checklist carry out by C&S maintenance team; c) Monitor/tracking program schedule; d) Implement the C&S maintenance schedules; e) Identifying and resolving the C&S technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs. 3. Vendor Management: Coordinating with external vendors or contractors for C&S maintenance and repair work. 4. Safety, Health & Environment (SHE) : Ensuring that all C&S activities adhere to safety regulations and protocols to minimize workplace accidents and hazards. 5. Quality: Ensuring that C&S maintenance and repair work is performed to high-quality standards.	Facility Supervisor Mechanical 1. Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for mechanical works, giving instructions and technical assistance. 2. O&M: a) Overseeing the mechanical repair work to ensure the completion of work; b) Verify mechanical work order and checklist carry out by C&S maintenance team; c) Monitor/tracking program schedule; d) Implement the mechanical maintenance schedules; e) Identifying and resolving the mechanical technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs. 3. Vendor Management: Coordinating with external vendors or contractors for mechanical maintenance and repair work. 4. SHE: Ensuring that all mechanical activities adhere to safety regulations and protocols to minimize workplace accidents and hazards. 5. Quality: Ensuring that mechanical maintenance and repair work is performed to high-quality standards.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOB AREA	CIVIL & STRUCTURE (C&S)	MECHANICAL SERVICE
	6. Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation.	Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation
LEVEL 2	<u>Facility Technician C&S</u> 1. O&M: a) To perform C&S checklist that has been carry out; b) Maintaining records and documentation related to maintenance activities, inspections, and repairs; c) To carry out C&S repair work as assigned by supervisor: d) Identifying and resolving the minor C&S technical issues. 2. SHE: Able to maintain implement health, safety and environment measure. 3. Quality: Able to maintain quality measure	<u>Facility Technician Mechanical</u> 1. O&M: a) To perform mechanical checklist that has been carry out: b) Maintaining records and documentation related to maintenance activities, inspections, and repairs: c) To carry out mechanical repair work as assigned by supervisor: d) Identifying and resolving the minor mechanical technical issues. 2. SHE: Able to maintain implement health, safety and environment measure. Quality: Able to maintain quality measure
LEVEL 1	<u>Facility Handyman C&S</u> 1. O&M: a) Minor repair work; b) Clear blockage for sewerage and plumbing system; c) Preparing tools and material for maintenance; d) Carry out basic repairing works for bricklayer, plaster, painting, concrete, ceiling and carpentry. 2. SHE: Ensure implementation of health, safety and environment measure.	No Job Title

Table 4.10 Occupational Responsibilities (OR) N811 (2/2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOBS AREA	ELECTRICAL SERVICE	PLUMBING SERVICE
LEVEL 8	No Job Title	No Job Title
LEVEL 7	No Job Title	No Job Title
LEVEL 6	No Job Title	No Job Title
LEVEL 5	Facility Management Manager Electrical 1. O&M planning - to plan O&M policies and guidelines, verify O&M works, plan O&M operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty. 2. Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff. 3. Finance and business planning - to plan overall FM activity budget, prepare FMP, manage project P&L and manage procurement method/approach. 4. Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures. 5. Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations. 6. Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal. 7. Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service	Facility Management Manager Plumbing 1. O&M planning - to plan O&M policies and guidelines, verify O&M works, plan O&M operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty. 2. Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff. 3. Finance and business planning - to plan overall FM activity budget, prepare FMP, manage project P&L and manage procurement method/approach. 4. Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures. 5. Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations. 6. Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal. 7. Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOB AREA	ELECTRICAL SERVICE	PLUMBING SERVICE
	performance level, coordinate change order management, and perform contract closure. 8. Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report. 9. Project management - to prepare PMP, assign project team members and perform project monitoring and control. 10. Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity	performance level, coordinate change order management, and perform contract closure. 8. Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report. 9. Project management - to prepare PMP, assign project team members and perform project monitoring and control. 10. Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity.
LEVEL 4	<u>Facility Management Executive Electrical</u> 1. O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage O&M technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity. 2. Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork. 3. Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule. 4. Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report. 5. Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report.	<u>Facility Management Executive Plumbing</u> 1. O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage O&M technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity. 2. Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork. 3. Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule. 4. Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report. 5. Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOB AREA	ELECTRICAL SERVICE	PLUMBING SERVICE
	6. Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level. 7. Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan. 8. Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.	6. Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level. 7. Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan. 8. Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.
LEVEL 3	<u>Facility Supervisor Electrical</u> 1. Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for electrical works, giving instructions and technical assistance. 2. O&M: a) Overseeing the electrical repair work to ensure the completion of work; b) Verify electrical work order and checklist carry out by C&S maintenance team; c) Monitor/tracking program schedule; d) Implement the electrical maintenance schedules; e) Identifying and resolving the electrical technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs. 3. Vendor Management: Coordinating with external vendors or contractors for electrical maintenance and repair work. 4. SHE: Ensuring that all electrical activities adhere to safety regulations and protocols to minimize workplace accidents and hazards.	<u>Facility Supervisor Plumbing</u> 1. Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for plumbing works, giving instructions and technical assistance. 2. O&M: a) Overseeing the plumbing repair work to ensure the completion of work; b) Verify C&S work order and checklist carry out by plumbing maintenance team; c) Monitor/tracking program schedule; d) Implement the plumbing maintenance schedules; e) Identifying and resolving the plumbing technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs. 3. Vendor Management: Coordinating with external vendors or contractors for plumbing maintenance and repair work. 4. SHE: Ensuring that all plumbing activities adhere to safety regulations and protocols to minimize workplace accidents and hazards.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES	
JOB AREA	ELECTRICAL SERVICE	PLUMBING SERVICE
	5. Quality: Ensuring that electrical maintenance and repair work is performed to high-quality standards. 6. Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation	5. Quality: Ensuring that plumbing maintenance and repair work is performed to high-quality standards. 6. Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation
LEVEL 2	<u>Facility Technician Electrical</u> 1. O&M: a) To perform electrical checklist that has been carry out: b) Maintaining records and documentation related to maintenance activities, inspections, and repairs: c) To carry out electrical repair work as assigned by supervisor: d) Identifying and resolving the minor electrical technical issues. 2. SHE: Able to maintain implement health, safety and environment measure. 3. Quality: Able to maintain quality measure	<u>Facility Technician Plumbing</u> 1. O&M: a) To perform plumber checklist that has been carry out: b) Maintaining records and documentation related to maintenance activities, inspections, and repairs: c) To carry out electrical repair work as assigned by supervisor: d) Identifying and resolving the minor plumber technical issues. 2. SHE: Able to maintain implement health, safety and environment measure. 3. Quality: Able to maintain quality measure.
LEVEL 1	No Job Title	<u>Plumbing Handyman</u> 1. O&M: a) Minor repair work; b) Clear blockage for sewerage and plumbing system; c) Preparing tools and material for maintenance; d) Carry out basic repairing works for plumbing. 2. SHE: Ensure implementation of health, safety and environment measure

Table 4.11 Occupational Responsibilities (OR) N812 (1/4)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE
LEVEL 8	No Job Title	No Job Title
LEVEL 7	No Job Title	No Job Title
LEVEL 6	No Job Title	No Job Title
LEVEL 5	<u>Building Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and control allocation of resources to project sites 3. Manage cleaning teams: a) Manage work schedules and deployment of manpower; b) Manage team improvement and capability development; c) Promote good teamwork in alignment with organisational core values 4. Manage contracts: a) Oversee the preparation of tender and quotations for cleaning operations; b) Manage internal and external parties involve in contract development; c) Negotiate terms and pricing to ensure accurate execution; d) Manage contract conflicts and mitigate corrective action; e) Provide solutions for contract conflicts	<u>Public Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and control allocation of resources to project sites 3. Manage cleaning teams: a) Manage work schedules and deployment of manpower; b) Manage team improvement and capability development; c) Promote good teamwork in alignment with organisational core values 4. Manage contracts: a) Oversee the preparation of tender and quotations for cleaning operations; b) Manage internal and external parties involve in contract development; c) Negotiate terms and pricing to ensure accurate execution; d) Manage contract conflicts and mitigate corrective action; e) Provide solutions for contract conflicts

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE
	5. Manage incidents: a) Analyse report on major incidents and emergencies for submission to the management; b) Propose preventive action or measure to avoid future occurrences of major incidents and emergencies	5. Manage incidents: a) Analyse report on major incidents and emergencies for submission to the management; b) Propose preventive action or measure to avoid future occurrences of major incidents and emergencies
LEVEL 4	<u>Building Cleaning Executive</u> 1. Manage Cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine. 3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development. 4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in	<u>Public Cleaning Executive</u> 1. Manage cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine. 3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development. 4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE
	resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management	limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management
LEVEL 3	<u>Building Cleaning Supervisor</u> 1. Supervise cleaning services: a) Implement operation plans to improve work processes; b) Deploy and assign cleaning tasks to the cleaning team; c) Ensure cleaning operations meet required quality standards; d) Liaise with clients at project sites; e) Ensure safety measures are adhered by cleaning team during cleaning operations; f) Conduct joint inspection with client; g) Record and report daily cleaning activities to management and client 2. Supervise materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitor stock control of materials, equipment, machine and chemical; c) Preventive maintenance schedule for cleaning machineries. 3. Supervise cleaning teams: a) Plan work schedules and deployment of manpower; b) Provide guidance and on the job training to cleaners; c) Review team performance on regular basis; d) Recommend process improvements to the cleaning team. 4. Supervise incidents: a) Respond to major incidents and emergencies; b) Report and update on major incidents and emergencies to the management.	<u>Public Cleaning Supervisor</u> 1. Supervise cleaning services: a) Implement operation plans to improve work processes; b) Deploy and assign cleaning tasks to the cleaning team; c) Ensure cleaning operations meet required quality standards; d) Liaise with clients at project sites; e) Ensure safety measures are adhered by cleaning team during cleaning operations; f) Conduct joint inspection with client; g) Record and report daily cleaning activities to management and client 2. Supervise materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitor stock control of materials, equipment, machine and chemical; c) Preventive maintenance schedule for cleaning machineries. 3. Supervise cleaning teams: a) Plan work schedules and deployment of manpower; b) Provide guidance and on the job training to cleaners; c) Review team performance on regular basis; d) Recommend process improvements to the cleaning team. 4. Supervise incidents: a) Respond to major incidents and emergencies; b) Report and update on major incidents and emergencies to the management.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOBS AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE
	<u>Building Cleaning Technician</u> 1. Perform cleaning services: a) Carry out specialise cleaning according to buildings requirement; b) Apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhere to safety measures; d) Record and report jobs done 2. Support cleaning teams : a) Handle technical aspect to cleaning operation; b) Monitor technical equipment performance to meet schedules and/or timeline; c) Manage high end equipment and machineries; d) Schedule Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assist supervisor request parts replacement, if required 3. Integrate sustainable technology: a) Identify issues on site and recommend appropriate techniques towards sustainability goal; b) Execute technical processes involving sustainable cleaning and implement new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	<u>Public Cleaning Technician</u> 1. Perform cleaning services: a) Carry out specialise cleaning according to buildings requirement; b) Apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhere to safety measures; d) Record and report jobs done 2. Support cleaning teams : a) Handle technical aspect to cleaning operation; b) Monitor technical equipment performance to meet schedules and/or timeline; c) Manage high end equipment and machineries; d) Schedule Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assist supervisor request parts replacement, if required 3. Integrate sustainable technology: a) Identify issues on site and recommend appropriate techniques towards sustainability goal; b) Execute technical processes involving sustainable cleaning and implement new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior
LEVEL 2	<u>Building Cleaning Team Leader</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures; c) Record and report jobs done 2. Monitor cleaning teams: a) Conduct induction and basic training for new cleaners; b) Conduct task briefing to cleaning teams; c) Assign cleaning	<u>Public Cleaning Team Leader</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures; c) Record and report jobs done 2. Monitor cleaning teams: a) Conduct induction and basic training for new cleaners; b) Conduct task briefing to cleaning teams; c) Assign cleaning

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE
	duties to cleaning teams: d) Monitor their performance to meet schedules and/or timeline. 3. Handle materials, equipment, machine and chemical: a) Prepare necessary cleaning tools, equipment, machine and chemicals: b) Maintain materials, equipment, machine and chemical in good working condition; c) Ensure adequate materials, equipment, machine and chemical, as required; d) Ensure supplies of consumable are adequate and replenished; e) Assist supervisor preparing stock inventory requisition 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	duties to cleaning teams: d) Monitor their performance to meet schedules and/or timeline. 3. Handle materials, equipment, machine and chemical: a) Prepare necessary cleaning tools, equipment, machine and chemicals: b) Maintain materials, equipment, machine and chemical in good working condition; c) Ensure adequate materials, equipment, machine and chemical, as required; d) Ensure supplies of consumable are adequate and replenished; e) Assist supervisor preparing stock inventory requisition 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior
LEVEL 1	<u>Building Cleaning Operator</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures Record and report jobs done 2. Handle tools, equipment and chemical; a) Prepare necessary cleaning tools, equipment and chemicals; b) Maintain tools, equipment and chemical adequate and in good working condition; c) Replenish and replace tools, equipment and chemical, as required. 3. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	<u>Public Cleaning Operator</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures Record and report jobs done 2. Handle tools, equipment and chemical; a) Prepare necessary cleaning tools, equipment and chemicals; b) Maintain tools, equipment and chemical adequate and in good working condition; c) Replenish and replace tools, equipment and chemical, as required. 3. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior

Table 4.12 Occupational Responsibilities (OR) N812 (2/4)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
LEVEL 8	No Job Title	No Job Title	No Job Title
LEVEL 7	No Job Title	No Job Title	No Job Title
LEVEL 6	No Job Title	No Job Title	No Job Title
LEVEL 5	<u>Transportation Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and control allocation of resources to project sites 3. Manage cleaning teams: a) Manage work schedules and deployment of manpower; b)	<u>Marine And River Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and control allocation of resources to project sites	<u>Building Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and control allocation of resources to project sites

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOB AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	Manage team improvement and capability development; c) Promote good teamwork in alignment with organisational core values 4. Manage contracts: a) Oversee the preparation of tender and quotations for cleaning operations; b) Manage internal and external parties involve in contract development; c) Negotiate terms and pricing to ensure accurate execution; d) Manage contract conflicts and mitigate corrective action; e) Provide solutions for contract conflicts 5. Manage incidents: a) Analyse report on major incidents and emergencies for submission to the management; b) Propose preventive action or measure to avoid future occurrences of major incidents and emergencies	3. Manage cleaning teams: a) Manage work schedules and deployment of manpower; b) Manage team improvement and capability development; c) Promote good teamwork in alignment with organisational core values 4. Manage contracts: a) Oversee the preparation of tender and quotations for cleaning operations; b) Manage internal and external parties involve in contract development; c) Negotiate terms and pricing to ensure accurate execution; d) Manage contract conflicts and mitigate corrective action; e) Provide solutions for contract conflicts 5. Manage incidents: a) Analyse report on major incidents and emergencies for submission to the management; b) Propose preventive action or measure to avoid future occurrences of major incidents and emergencies	3. Manage cleaning teams: a) Manage work schedules and deployment of manpower; b) Manage team improvement and capability development; c) Promote good teamwork in alignment with organisational core values 4. Manage contracts: a) Oversee the preparation of tender and quotations for cleaning operations; b) Manage internal and external parties involve in contract development; c) Negotiate terms and pricing to ensure accurate execution; d) Manage contract conflicts and mitigate corrective action; e) Provide solutions for contract conflicts 5. Manage incidents: a) Analyse report on major incidents and emergencies for submission to the management; b) Propose preventive action or measure to avoid future occurrences of major incidents and emergencies
LEVEL 4	<u>Transportation Cleaning Executive</u> 1. Manage Cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by	<u>Marine And River Cleaning Executive</u> 1. Manage Cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and	<u>Building Cleaning Executive</u> 1. Manage Cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine. 3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development. 4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual	quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine. 3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development. 4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d)	quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine. 3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development. 4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOB AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management	Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management	Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management
LEVEL 3	<u>Transport Cleaning Supervisor</u> 1. Supervise cleaning services: a) Implement operation plans to improve work processes; b) Deploy and assign cleaning tasks to the cleaning team; c) Ensure cleaning operations meet required quality standards; d) Liaise with clients at project sites; e) Ensure safety measures are adhered by cleaning team during cleaning operations; f) Conduct joint inspection with client; g) Record and report daily cleaning activities to management and client 2. Supervise materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine	<u>Marine And River Cleaning Supervisor</u> 1. Supervise cleaning services: a) Implement operation plans to improve work processes; b) Deploy and assign cleaning tasks to the cleaning team; c) Ensure cleaning operations meet required quality standards; d) Liaise with clients at project sites; e) Ensure safety measures are adhered by cleaning team during cleaning operations; f) Conduct joint inspection with client; g) Record and report daily cleaning activities to management and client 2. Supervise materials, equipment, machine and chemical and maintenance schedule: a)	<u>Hospital Cleaning Supervisor</u> 1. Supervise cleaning services: a) Implement operation plans to improve work processes; b) Deploy and assign cleaning tasks to the cleaning team; c) Ensure cleaning operations meet required quality standards; d) Liaise with clients at project sites; e) Ensure safety measures are adhered by cleaning team during cleaning operations; f) Conduct joint inspection with client; g) Record and report daily cleaning activities to management and client 2. Supervise materials, equipment, machine and chemical and maintenance schedule: a)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	and chemical in a timely manner; b) Monitor stock control of materials, equipment, machine and chemical; c) Preventive maintenance schedule for cleaning machineries. 3. Supervise cleaning teams: a) Plan work schedules and deployment of manpower; b) Provide guidance and on the job training to cleaners; c) Review team performance on regular basis; d) Recommend process improvements to the cleaning team. 4. Supervise incidents: a) Respond to major incidents and emergencies; b) Report and update on major incidents and emergencies to the management.	Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitor stock control of materials, equipment, machine and chemical; c) Preventive maintenance schedule for cleaning machineries. 3. Supervise cleaning teams: a) Plan work schedules and deployment of manpower; b) Provide guidance and on the job training to cleaners; c) Review team performance on regular basis; d) Recommend process improvements to the cleaning team. 4. Supervise incidents: a) Respond to major incidents and emergencies; b) Report and update on major incidents and emergencies to the management.	Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitor stock control of materials, equipment, machine and chemical; c) Preventive maintenance schedule for cleaning machineries. 3. Supervise cleaning teams: a) Plan work schedules and deployment of manpower; b) Provide guidance and on the job training to cleaners; c) Review team performance on regular basis; d) Recommend process improvements to the cleaning team. 4. Supervise incidents: a) Respond to major incidents and emergencies; b) Report and update on major incidents and emergencies to the management.
	<u>Transport Cleaning Technician</u> 1. Perform cleaning services: a) Carry out specialise cleaning according to buildings requirement; b) Apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhere to safety measures; d) Record and report jobs done 2. Support cleaning teams : a) Handle technical aspect to cleaning operation; b) Monitor technical equipment performance to meet	<u>Marine And River Cleaning Technician</u> 1. Perform cleaning services: a) Carry out specialise cleaning according to buildings requirement; b) Apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhere to safety measures; d) Record and report jobs done 2. Support cleaning teams : a) Handle technical aspect to cleaning operation; b) Monitor	<u>Hospital Cleaning Technician</u> 1. Perform cleaning services: a) Carry out specialise cleaning according to buildings requirement; b) Apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhere to safety measures; d) Record and report jobs done 2. Support cleaning teams : a) Handle technical aspect to cleaning operation; b) Monitor

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOB AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	schedules and/or timeline; c) Manage high end equipment and machineries; d) Schedule Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assist supervisor request parts replacement, if required 3. Integrate sustainable technology: a) Identify issues on site and recommend appropriate techniques towards sustainability goal; b) Execute technical processes involving sustainable cleaning and implement new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	technical equipment performance to meet schedules and/or timeline; c) Manage high end equipment and machineries; d) Schedule Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assist supervisor request parts replacement, if required 3. Integrate sustainable technology: a) Identify issues on site and recommend appropriate techniques towards sustainability goal; b) Execute technical processes involving sustainable cleaning and implement new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	technical equipment performance to meet schedules and/or timeline; c) Manage high end equipment and machineries; d) Schedule Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assist supervisor request parts replacement, if required 3. Integrate sustainable technology: a) Identify issues on site and recommend appropriate techniques towards sustainability goal; b) Execute technical processes involving sustainable cleaning and implement new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior
LEVEL 2	<u>Transport Cleaning Team Leader</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures; c) Record and report jobs done 2. Monitor cleaning teams: a) Conduct induction and basic training for new cleaners; b) Conduct task briefing to cleaning teams; c) Assign	<u>Marine And River Cleaning Team Leader</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures; c) Record and report jobs done 2. Monitor cleaning teams: a) Conduct induction and basic training for new cleaners; b)	<u>Hospital Cleaning Team Leader</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures; c) Record and report jobs done 2. Monitor cleaning teams: a) Conduct induction and basic training for new cleaners; b)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOB AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	cleaning duties to cleaning teams: d) Monitor their performance to meet schedules and/or timeline. 3. Handle materials, equipment, machine and chemical: a) Prepare necessary cleaning tools, equipment, machine and chemicals: b) Maintain materials, equipment, machine and chemical in good working condition; c) Ensure adequate materials, equipment, machine and chemical, as required; d) Ensure supplies of consumable are adequate and replenished; e) Assist supervisor preparing stock inventory requisition 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	Conduct task briefing to cleaning teams; c) Assign cleaning duties to cleaning teams: d) Monitor their performance to meet schedules and/or timeline. 3. Handle materials, equipment, machine and chemical: a) Prepare necessary cleaning tools, equipment, machine and chemicals: b) Maintain materials, equipment, machine and chemical in good working condition; c) Ensure adequate materials, equipment, machine and chemical, as required; d) Ensure supplies of consumable are adequate and replenished; e) Assist supervisor preparing stock inventory requisition 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	Conduct task briefing to cleaning teams; c) Assign cleaning duties to cleaning teams: d) Monitor their performance to meet schedules and/or timeline. 3. Handle materials, equipment, machine and chemical: a) Prepare necessary cleaning tools, equipment, machine and chemicals: b) Maintain materials, equipment, machine and chemical in good working condition; c) Ensure adequate materials, equipment, machine and chemical, as required; d) Ensure supplies of consumable are adequate and replenished; e) Assist supervisor preparing stock inventory requisition 4. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior
LEVEL 1	<u>Transport Cleaning Operator</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures Record and report jobs done 2. Handle tools, equipment and chemical; a) Prepare necessary cleaning tools, equipment and chemicals; b) Maintain tools, equipment and chemical adequate and in good working	<u>Marine And River Cleaning Operator</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures Record and report jobs done 2. Handle tools, equipment and chemical; a) Prepare necessary cleaning tools, equipment and chemicals; b) Maintain tools, equipment and chemical adequate and in good working	<u>Hospital Cleaning Operator</u> 1. Perform cleaning services: a) Cleaning according to buildings requirement; b) Adhere to safety measures Record and report jobs done 2. Handle tools, equipment and chemical; a) Prepare necessary cleaning tools, equipment and chemicals; b) Maintain tools, equipment and chemical adequate and in good working

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
	condition; c) Replenish and replace tools, equipment and chemical, as required. 3. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	condition; c) Replenish and replace tools, equipment and chemical, as required. 3. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior	condition; c) Replenish and replace tools, equipment and chemical, as required. 3. Handle incidents: a) Respond immediately to incidents and emergencies; b) Report abnormalities to immediate superior

Table 4.13 Occupational Responsibilities (OR) N812 (3/4)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
LEVEL 8	No Job Title	No Job Title	No Job Title
LEVEL 7	No Job Title	No Job Title	No Job Title
LEVEL 6	No Job Title	No Job Title	No Job Title
LEVEL 5	<u>Kitchen Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitoring and controlling allocation of resources of project sites	<u>Oil & Gas Cleaning Manager</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and controlling allocation of resources of project sites	<u>Heritage Conservator</u> 1. Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship 2. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitor and control allocation of resources to project sites

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOB AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
	3. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values 4. Managing contracts: a) Overseeing the preparation of tenders and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective actions; e) Providing solutions for contract conflicts 5. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive actions or measures to avoid future major incidents and emergencies	3. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values 4. Managing contracts: a) Overseeing the preparation of tenders and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective actions; e) Providing solutions for contract conflicts 5. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive actions or measures to avoid future major incidents and emergencies	3. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values 4. Managing contracts: a) Overseeing the preparation of tenders and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective actions; e) Providing solutions for contract conflicts 5. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive actions or measures to avoid future major incidents and emergencies
LEVEL 4	<u>Kitchen Cleaning Executive</u> 1. Managing cleaning services; a) Ensuring quality service delivery by coordinating with supervisors and clients; b) Monitoring operation expenses according to the contract budget; c) Promoting safety measures to be adhered by the cleaning team during cleaning operations; d)	<u>Oil & Gas Cleaning Executive</u> 1. Managing cleaning services; a) Ensuring quality service delivery by coordinating with supervisors and clients; b) Monitoring operation expenses according to the contract budget; c) Promoting safety measures to be adhered by the cleaning team during cleaning	<u>Heritage Assistant Conservator</u> 1. Managing cleaning services; a) Ensuring quality service delivery by coordinating with supervisors and clients; b) Monitoring operation expenses according to the contract budget; c) Promoting safety measures to be adhered by the cleaning team during cleaning

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
	Assisting in improvement of work procedures and quality service delivery by reviewing operation plan; e) Collecting, compiling and analysing relevant data to recommend cleaning process improvement; f) Recording and reporting daily cleaning activities to the management team and clients; g) Conducting quality assurance with clients 2. Managing materials, equipment, machine, chemical and maintenance schedule; a) Allocating materials, equipment, machine and chemical to project sites; b) Maintaining supplies of materials, equipment, machine and chemical; c) Identifying and recommending suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implementing maintenance schedules for equipment and machine. 3. Managing cleaning teams: a) Executing work schedules and deployment of manpower; b) Executing effective work processes; c) Executing team improvement and capability development. 4. Managing contracts: a) Attending site visits for potential projects; b) Assisting in preparation of tender/quotation; c) Ensuring service level	operations; d) Assisting in improvement of work procedures and quality service delivery by reviewing operation plan; e) Collecting, compiling and analysing relevant data to recommend cleaning process improvement; f) Recording and reporting daily cleaning activities to the management team and clients; g) Conducting quality assurance with clients 2. Managing materials, equipment, machine, chemical and maintenance schedule; a) Allocating materials, equipment, machine and chemical to project sites; b) Maintaining supplies of materials, equipment, machine and chemical; c) Identifying and recommending suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implementing maintenance schedules for equipment and machine. 3. Managing cleaning teams: a) Executing work schedules and deployment of manpower; b) Executing effective work processes; c) Executing team improvement and capability development. 4. Managing contracts: a) Attending site visits for potential projects; b) Assisting in	operations; d) Assisting in improvement of work procedures and quality service delivery by reviewing operation plan; e) Collecting, compiling and analysing relevant data to recommend cleaning process improvement; f) Recording and reporting daily cleaning activities to the management team and clients; g) Conducting quality assurance with clients 2. Managing materials, equipment, machine, chemical and maintenance schedule; a) Allocating materials, equipment, machine and chemical to project sites; b) Maintaining supplies of materials, equipment, machine and chemical; c) Identifying and recommending suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implementing maintenance schedules for equipment and machine. 3. Managing cleaning teams: a) Executing work schedules and deployment of manpower; b) Executing effective work processes; c) Executing team improvement and capability development. 4. Managing contracts: a) Attending site visits for potential projects; b) Assisting in

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOB AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
	agreement is fulfilled as per contract; d) Ensuring operation expenses are within budget guidelines; e) Raising requests for purchases as required within agreed limits; f) Following up on contractual payments according to credit terms; g) Negotiating in resolving contract conflicts; h) Reporting request for changes in contract terms to the management 5. Managing incidents: a) Guiding supervisor and team leader to respond to major incidents and emergencies; b) Validating report on major incidents and emergencies for submission to the management	preparation of tender/quotation; c) Ensuring service level agreement is fulfilled as per contract; d) Ensuring operation expenses are within budget guidelines; e) Raising requests for purchases as required within agreed limits; f) Following up on contractual payments according to credit terms; g) Negotiating in resolving contract conflicts; h) Reporting request for changes in contract terms to the management 5. Managing incidents: a) Guiding supervisor and team leader to respond to major incidents and emergencies; b) Validating report on major incidents and emergencies for submission to the management	preparation of tender/quotation; c) Ensuring service level agreement is fulfilled as per contract; d) Ensuring operation expenses are within budget guidelines; e) Raising requests for purchases as required within agreed limits; f) Following up on contractual payments according to credit terms; g) Negotiating in resolving contract conflicts; h) Reporting request for changes in contract terms to the management 5. Managing incidents: a) Guiding supervisor and team leader to respond to major incidents and emergencies; b) Validating report on major incidents and emergencies for submission to the management
LEVEL 3	<u>Kitchen Cleaning Supervisor</u> 1. Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by the cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and	<u>Oil & Gas Cleaning Supervisor</u> 1. Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by the cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily	<u>Heritage Cleaning Supervisor</u> 1. Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by the cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
	reporting daily cleaning activities to management team and client 2. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule for cleaning machineries. 3. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on-the-job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. 4. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management team.	cleaning activities to management team and client 2. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule for cleaning machineries. 3. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on-the-job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. 4. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management team.	cleaning activities to management team and client 2. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule for cleaning machineries.. 3. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on-the-job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. 4. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management team.
	<u>Kitchen Cleaning Technician</u> 1. Performing cleaning services: a) Carrying out specialty cleaning according to buildings requirements; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhering to	<u>Oil & Gas Cleaning Technician</u> 1. Performing cleaning services: a) Carrying out specialty cleaning according to buildings requirements; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning;	<u>Heritage Cleaning Technician</u> 1. Performing cleaning services: a) Carrying out specialty cleaning according to buildings requirements; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning;

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
	safety measures; d) Recording and reporting completed jobs. 2. Supporting cleaning teams: a) Handling technical aspect to cleaning operation; b) Monitoring technical equipment performance to meet schedules and/or timeline; c) Managing high-end equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assisting supervisor in requesting parts replacement, if required 3. Integrating sustainable technology: a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring the effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior	c) Adhering to safety measures; d) Recording and reporting completed jobs. 2. Supporting cleaning teams: a) Handling technical aspect to cleaning operation; b) Monitoring technical equipment performance to meet schedules and/or timeline; c) Managing high-end equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assisting supervisor in requesting parts replacement, if required 3. Integrating sustainable technology: a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring the effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior	c) Adhering to safety measures; d) Recording and reporting completed jobs 2. Supporting cleaning teams: a) Handling technical aspect to cleaning operation; b) Monitoring technical equipment performance to meet schedules and/or timeline; c) Managing high-end equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assisting supervisor in requesting parts replacement, if required 3. Integrating sustainable technology: a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring the effectiveness of the sustainability process improvement towards lesser environmental impact. 4. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
LEVEL 2	<u>Kitchen Cleaning Team Leader</u> 1. Performing cleaning services: a) Cleaning according to buildings requirement; b) Adhering to safety measures; c) Recording and reporting completed jobs 2. Monitoring cleaning teams: a) Conducting induction and basic training for new cleaners; b) Conducting task briefing to cleaning teams; c) Assigning cleaning duties to cleaning teams; d) Monitoring their performance to meet schedules and/or timeline. 3. Handling materials, equipment, machine and chemical: a) Preparing necessary cleaning tools, equipment, machine and chemicals; b) Maintaining materials, equipment, machine and chemical in good condition; c) Ensuring adequate materials, equipment, machine and chemical, as required; d) Ensuring supplies of consumable are adequate and replenished; e) Assisting supervisor in preparing stock inventory requisition 4. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior	No Job Title	No Job Title

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(812) CLEANING ACTIVITIES		
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE
LEVEL 1	<u>Kitchen Cleaning Operator</u> 1. Performing cleaning services: a) Cleaning according to buildings requirement; b) Adhering to safety measures c) Recording and reporting completed jobs 2. Handling tools, equipment and chemical; a) Preparing necessary cleaning tools, equipment and chemicals; b) Maintaining tools, equipment and chemical adequate and in good condition; c) Replenishing and replacing tools, equipment and chemical, as required. 3. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior	No Job Title	No Job Title

Table 4.14 Occupational Responsibilities (OR) N812 (4/4)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	SERTU SERVICE
LEVEL 8	No Job Title	No Job Title
LEVEL 7	No Job Title	No Job Title
LEVEL 6	No Job Title	No Job Title
LEVEL 5	<u>Building Cleaning Manager</u> - Managing cleaning services: a) Overseeing effective cleaning operation towards quality service delivery to the client; b) Enforcing safety measures during cleaning operations; c) Planning cleaning operations budget; d) Planning work procedures improvement and quality service delivery; e) Analysing relevant data for cleaning process improvement; f) Conducting quality audit with client; g) Implementing strategic plans and added value services to improve client relationship - Managing inventory, equipment and maintenance schedule: a) Selecting and recommending appropriate equipment and/or technologies and supplies for project sites; b) Ensuring sufficient materials, equipment, machine, chemical; c) Recommending suitable equipment and machineries with the new technologies for business operations; d) Monitoring and controlling allocation of resources to project sites - Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values - Managing contracts: a) Overseeing the preparation of tender and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective action; e) Providing solutions for contract conflicts	<u>Sertu Services Manager</u> - Managing cleaning services: a) Overseeing effective cleaning operation towards quality service delivery to the client; b) Enforcing safety measures during cleaning operations; c) Planning cleaning operations budget; d) Planning work procedures improvement and quality service delivery; e) Analysing relevant data for cleaning process improvement; f) Conducting quality audit with client; g) Implementing strategic plans and added value services to improve client relationship - Managing inventory, equipment and maintenance schedule: a) Selecting and recommending appropriate equipment and/or technologies and supplies for project sites; b) Ensuring sufficient materials, equipment, machine, chemical; c) Recommending suitable equipment and machineries with the new technologies for business operations; d) Monitoring and controlling allocation of resources to project sites - Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values - Managing contracts: a) Overseeing the preparation of tender and quotations for cleaning operations; b) Managing internal and external

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	SERTU SERVICE
	5. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive action or measure to avoid future major incidents and emergencies	parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective action; e) Providing solutions for contract conflicts 5. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive action or measure to avoid future major incidents and emergencies
LEVEL 4	<u>Building Cleaning Executive</u> 1. Manage Cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine. 3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development.	<u>Sertu Services Executive</u> 1. Manage Cleaning services; a) Ensure quality service delivery which comply to syariah by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures and syariah adherence by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance and syariah adherence with client 2. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical which comply to syariah to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve syariah adherence and cleaning operations; d) Implement maintenance schedules for equipment and machine.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	SERTU SERVICE
	4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management	3. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes which comply to syariah; c) Execute team improvement and capability development. 4. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management 5. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management
LEVEL 3	<u>External High Rise Building Cleaning Supervisor</u> 1. Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily cleaning activities to management and client. 2. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule of cleaning machineries.	<u>Sertu Services Supervisor</u> 1. Implementation of sertu services – a) performing Sertu pre-service work, b) training and guiding Sertu workforce on syariah requirements, c) performing sertu process monitoring, d) monitoring final and finishing work, e) supervising discipline, performance and welfare of Sertu workforce and f) preparing Sertu work reports. 2. Identifying issues on site and recommending appropriate technics towards syariah compliance and sustainability goal. 3. Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning and syariah compliance. 4. Executing technical processes involving syariah adherence and sustainable cleaning and implement new technology application.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	SERTU SERVICE
	- Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on the job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. - Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management.	Monitoring effectiveness of the syariah adherence and sustainability process improvement towards lesser environmental impact.
	<u>External High Rise Building Cleaning Technician</u> - Performing cleaning services; a) Carrying out exterior high-rise cleaning; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhering to safety measures; d) Recording and reporting completion of jobs - Supporting cleaning teams: a) Handling safety aspect to cleaning operation; b) Monitoring technical equipment performance to meet safety requirement; c) Managing high rise access equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for high-rise access equipment and machineries - Integrating sustainable technology; a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. - Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior	<u>Sertu Services Technician</u> - Performing cleaning services: a) Cleaning according to Islamic Syariah requirement; b) Adhering to syariah requirements and safety measures; c) Recording and reporting completion of jobs - Handling tools, equipment and chemical according to <i>Shariah</i>; b) Preparing necessary <i>Shariah</i> compliance cleaning tools, equipment and chemicals; c) Maintaining tools, equipment and chemical adequate and in good condition; d) Replenishing and replacing tools, equipment and chemical, as required - Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES	
GROUP	(812) CLEANING ACTIVITIES	
JOB AREA	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	<i>SERTU</i> SERVICE
LEVEL 2	No Job Title	No Job Title
LEVEL 1	No Job Title	No Job Title

Table 4.15 Occupational Responsibilities (OR) N813 (1/2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOBS AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE
Level 8	No Job Title	No Job Title	No Job Title
Level 7	No Job Title	No Job Title	No Job Title
Level 6	No Job Title	No Job Title	No Job Title
Level 5	<u>Landscape Manager / Landscape Architect</u> 1. Purpose of landscape planning and design – to understand the purpose, goal, objectives, and concept of landscape planning and design. 2. Interpretation of landscape planning and design plan – to interpret the landscape planning and design intentions for identification of any variation, conflict, dispute, limitations and interfacing 3. Construction planning - to assess and propose landscape installation and construction methods. 4. Planning of landscape installation and construction strategy – to plan and formulate broad strategy for landscape installation and construction scheduling 5. Administer landscape construction tender and contract – to manage landscape tender, contractual matters including budget cost estimation, and procurement, billing procedures and account.	<u>Landscape Operations Manager</u> 1. Strategy development - to measurable objectives throughout all levels of an organizations. 2. Team management – to manage team, quality and cost. 3. Operation Management – to manage on operation and improvements of management expectation for getting work done. 4. Schedule strategy - strategies the operation schedules of maintenance requirement 5. Defect management - to manage repair and warranties management 6. Project development – to do planning, organizing, coordinating, and controlling the resources for upgrading and/or modification 7. Operational decision – manage and facilitate operational and process decisions as authorised by the management 8. Time management - exceptional attention to detail and time management skills	<u>Field Maintenance Manager</u> 1. Planning and developing a comprehensive yearly maintenance programme for landscape maintenance activities 2. Planning and developing maintenance programme for maintenance of irrigation and drainage systems 3. Planning and developing a comprehensive programme for detection, treatment and control of pest and disease infestation 4. Planning and developing strategies for nursery operations and management programs. 5. Planning and developing maintenance and repairs / services of hardscape elements 6. Planning and managing administrative functions

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE
	6. Approval process – to manage and obtain necessary approval for construction process from relevant authorities and clients		7. Planning and strategizing supervisory functions
Level 4	<u>Landscape Executive / Landscape Designer</u> 1. Purpose of landscape design – to understand the purpose, goal, objectives, and concept of landscape design. 2. Interpretation of landscape design plan – to assist in the interpretation of the landscape design intentions, variation, conflict, limitations and interfacing. 3. Construction planning – to assist in assessing and proposing landscape installation and construction methods. 4. Landscape installation and construction strategy – to implement broad strategy for landscape installation including on-site scheduling and manpower distribution. 5. Quality control measures – to verify materials use and works completion as pre required by the specification 6. Administer landscape construction tender and contract – to implement and operate landscape tender, contractual matters including budget control billing process and account.	<u>Landscape Operations Executive</u> 1. Team monitoring – to monitor team, quality and cost. 2. Report preparation - to prepare and submit report on operation and improvements of management expectation for getting work done. 3. Schedule monitoring - monitor schedules of maintenance requirement as per planned. 4. Site Problem - manage team and problem solving on site 5. Problem solving – monitor solving problems creatively 6. Task delegation - organizing and delegating assignments to team members	<u>Field Executive</u> 1. Implement and administrate O&M programme for landscape maintenance activities 2. Inspect and ensure irrigation and drainage system are functioning and operating at an optimum level. 3. Implement a systematic pest and disease control to ensure early detection of any incidents of infestation 4. Implement and monitor nursery programs and activities to meet the standards 5. Implement and monitor hardscape activities to meet the standards and maintenance strategies 6. Implement and monitor administrative functions as to its schedule

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	<i>(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES</i>		
JOBS AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE
	7. Approval process – to assist in obtaining necessary approval for construction process from relevant authorities and clients		

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE
Level 3	<u>Design Coordinator</u> 1. Landscape construction drawings – to understand the purpose of design and to clarify construction methods and materials installation 2. Site management – to organise site mobilization including of the management of the manpower scheduling, materials and machinery as well as site safety, cleanliness and operable for construction process 3. Site preparation – to supervise the preparation of the site for landscape construction purposes including setting up the site for hard landscape and soft landscape features 4. Materials inspection – to check and validate materials used for installation and construction as per required by specification. 5. Landscape installation and construction – to supervise the installation and construction of the landscape materials as per required by specification and construction method 6. Quality control measures – to verify the quality works completion as pre required by the specification.	<u>Landscape Operations Supervisor</u> 1. Garden maintenance coordination and demonstration - to identify any garden maintenance requirement and plan for appropriate actions according to workplace and organization procedures. 2. Garden maintenance monitoring - to inspect and monitor all garden maintenance works whilst detect problems and make recommendation for corrective actions. 3. Nursery operation monitoring - to inspect and monitor all garden maintenance works whilst detect problems and make recommendation for corrective actions. 4. Garden equipment and machinery maintenance monitoring - to inspect and monitor all garden tools, equipment and machinery maintenance works whilst detect problems and make recommendation for corrective actions. 5. Garden inventory monitoring - to inspect and update garden inventory. 6. Manpower planning and staff welfare -to distribute manpower accordingly.	<u>Field Supervisor / Greenkeeper</u> 1. Assist in operating and monitoring of turf maintenance operations 2. Assist in operating and monitoring softscape operational activities 3. Assist in operating and monitoring of irrigation and drainage functional activities 4. Assist in monitoring of soil fertility and soil improvement activity 5. Assist in monitoring and measuring pest and disease infestation for control program 6. Assist in complying with acceptable horticultural standards 7. Assist in monitoring any renovation activities 8. Assist in administrating monitoring subcontracts works as necessary

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE
Level 2	No Job Title	<u>Maintenance Technician</u> 1. Plant identification and propagation - to prepare and handle tools, equipment and materials for all plant identification and propagation works adhering to Health, Safety & Environment (HSE) rules & regulation. 2. Pruning works - to prepare and handle tools, equipment and materials for all pruning works adhering to HSE rules & regulation. 3. Garden pest and disease control - to prepare and handle tools, equipment and materials for all garden pest and disease control adhering to HSE rules & regulation. 4. Plant fertilization - to prepare and handle tools, equipment and materials for all fertilizing works adhering HSE rules & regulation. 5. Garden tools, equipment and machinery maintenance - to prepare and handle tools, equipment and materials for all garden equipment and machinery maintenance works adhering HSE rules & regulation. 6. General Garden maintenance - to prepare and handle tools, equipment and materials for all general garden maintenance works adhering to HSE rules & regulation. 7. Water features and water bodies maintenance - to prepare and handle tools, equipment and materials for all water bodies maintenance works adhering to HSE rules & regulation adhering to HSE rules & regulation	<u>Field Team Leader / Assistant Greenkeeper</u> 1. Perform turf maintenance 2. Perform and record softscape activities 3. Perform and record the functionality of irrigation and drainage activity 4. Perform and record issues on soil fertility activity 5. Perform and record issues on pest and disease control program 6. Perform and record the status of horticultural practice 7. Perform record the status of administrative functions

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE
		8. Bonsai and topiary works - to prepare and handle tools, equipment and materials for all bonsai and topiary works adhering to HSE rules & regulation.	
Level 1	No Job Title	<u>Maintenance Workers</u> 1. Lawn and turf maintenance - to prepare and handle tools, equipment and materials for all lawn and turf maintenance works, adhering to HSE rules & regulation. 2. Landscape trees, palms and bamboos maintenance - to prepare and handle tools, equipment and materials for all landscape trees, palms and bamboos maintenance works adhering to HSE rules and regulations. 3. Shrubs, ground covers and vines maintenance - to prepare and handle tools, equipment and materials for all shrubs, ground covers and vines maintenance works, adhering to Health, Safety & Environment) rules & regulation. 4. Annuals maintenance - to prepare and handle tools, equipment and materials for all annuals maintenance works adhering to HSE rules and regulations. 5. Aquatic plant maintenance - to prepare and handle tools, equipment and materials for all aquatic plants maintenance works adhering to HSE rules and regulations.	<u>Lawn Care Worker / Landscaper</u> 1. Perform turf maintenance based on approved schedules and methods 2. Perform softscape activities based on approved programmes and methods 3. Perform maintenance of irrigation and drainage activity as scheduled and based on methods 4. Perform soil conditioning and improving soil fertility activity 5. Perform inspection and/or treatment on pest and disease control programmes 6. Perform maintenance tasks based on standard horticultural practices 7. Perform turf renovation activities

Table 4.16 Occupational Responsibilities (OR) N813 (2/2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
Level 8	No Job Title	No Job Title	No Job Title
Level 7	No Job Title	No Job Title	No Job Title
Level 6	No Job Title	No Job Title	No Job Title
Level 5	<u>Landscape Operations Manager / Arborist / Horticulturist</u> 1. Tree installation and establishment - to perform tree selection, plan planting site, perform planting work, perform transplanting work and prepare stakeholder report on tree installation and establishment. 2. Tree risk management - to analyse tree risk assessment requirement, perform tree risk assessment, perform tree risk mitigation work and prepare stakeholder report on tree risk management. 3. Arborist's safety management - to plan site and personal safety, manage tree workers safety, manage public safety and prepare stakeholder report on arborist's safety management. 4. Tree protection works during construction - to manage tree protection works during construction, manage tree support and lightning protection, prepare stakeholder report on protection works during construction. 5. Arboriculture managerial function - to manage stakeholder, produce job sheet, manage arboriculture team, validate arborist's report, manage urban forestry program and manage inventory system.	No Job Title	<u>Quality Control And Sustainability Manager</u> 1. Sustainable framework development - to interpret sustainable management policy and objectives, initiating sustainable management committee, manage sustainable training programme and establish sustainable programmes 2. Green procurement planning - to help verify green vendors, help in analysing LCC for landscape, help verify green products and services criteria, help in approval process of procuring / managing green products and services including service contracts. 3. Reduce, Reuse & Recycle (3R) programme planning - to prepare awareness programme, verify 3R inspection report and review 3R performance monitoring report. 4. Energy management planning - to coordinate / perform energy audit report, prepare energy saving action plan, prepare energy efficiency programme & resources, periodically reviewing

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOBS AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
			energy performance monitoring report and review energy efficiency programme. 5. Water management planning – to establish reports on water consumption and perform monitoring water usage, conduct and review water savings programme, ensure the availability of alternative source of water supply. 6. LCC planning - to assess LCC costing data requirement, verify LCC data and populate LCC report. 7. Local community participation planning - to interpret policy and target for local community sustainability programme, to plan and review the effectiveness of sustainability program for local community 8. Environmental management practices - to manage cleaner production (CP) / material flow cost accounting (MFCA), coordinate air, water and noise pollution control activities. 9. Indoor Air Quality (IAQ) planning - to develop and provide IAQ programme, provide IAQ resources and review IAQ report.
Level 4	<u>Landscape Operations Executive / Assistant Arborist / Assistant Horticulturist</u> 1. Tree identification - to analyse tree identification requirement, collect tree parts sample, analyse tree	<u>Hardscape Executive</u> 1. Hardscape inventory and inspection planning – to periodically plan the	<u>Quality Control And Sustainability Executive</u> 1. Sustainable implementation framework - to implement and monitor sustainable

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
	morphological characteristic and prepare tree identification work report. 2. Soil assessment - to determine location of soil sampling, collect soil sample, perform soil moisture test, perform ponding test, perform soil compaction test and prepare soil assessment work report. 3. Tree irrigation and drainage development - to analyse tree water requirement based on tree species, inspect irrigation system functionality, inspect drainage system functionality, perform water irrigation and prepare water irrigation & drainage work report. 4. Tree fertilization - to analyse tree fertilization requirement, analyse nutrient deficiency symptom on trees, perform sample collection for foliar analysis, perform tree fertilization and prepare tree fertilization work report. 5. Tree pruning - to plan tree pruning works, prepare pruning tools and equipment, perform pruning work at site and prepare pruning work report. 6. Plant health care (PHC) management - to perform preventive measure on PHC, diagnose tree abnormality due to pest, diagnose tree abnormality due to diseases, diagnose tree abnormality due to abiotic factors, perform sample collection for laboratory analysis, prepare pest & diseases control tools & equipment,	hardscape inventory and inspection schedule based on the site needs 2. Maintenance strategies planning – to plan the hardscape maintenance strategies for problem’s prevention 3. Maintenance operation arrangement – to arrange short term and long-term hardscape maintenance operation 4. Maintenance budgeting – to analyse and project the hardscape maintenance budgeting 5. Manpower planning – to prepare and distribute the manpower needed based on task.	implementation framework and to execute training programme as well as produce training report 2. Green procurement process evaluation - to implement and evaluate green vendor application, assist in performing LCC costing analysis, evaluate green products and services criteria, evaluate green products and services procurement and monitor green products and services procurement. 3. 3R programme coordination - to coordinate wastes inspection, set up target or performance indicator, submit 3R plan activities, organise awareness programme, monitor 3R activities and produce 3R status report. 4. Energy management plan coordination - to propose / monitor performance indicator, assist in coordinating training programme, execute training programme, assist coordinating energy audit, assist analyse energy data, produce energy performance report and coordinate energy saving measures and performance monitoring. 5. Water management plan coordination - to assist in coordinating consumption identify status of water savings programme resources and assist in supervising alternative resource of water supply.

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
	perform pest & diseases control and prepare PHC work report. 7. Tree inventory and inspection - to perform tree data collection, perform tree condition inspection and perform data entry into tree inventory system. 8. Working in trees - to analyse working in trees requirements, assess tree condition, check climbing equipment condition, perform tree climbing, operate tools and equipment in trees, perform tree felling, perform emergency response & aerial rescue and prepare working in trees work report.		6. LCC evaluation - to identify and measure LCC data requirement, assist in reviewing LCC data, assist in performing LCC costing (LCC) and prepare periodic LCC report 7. Local community participation coordination - to propose sustainability activities for local community, propose sustainability programme for local community to superior for approval and monitor effectiveness of sustainability program for local community. 8. IAQ evaluation - to identify resource required to perform IAQ assessment, produce IAQ report and monitor rectification work
Level 3	No Job Title	<u>Hardscape Supervisor</u> 1. Inventory and inspection monitoring - to inspect and update the site's inventory and inspection 2. Maintenance coordination and demonstration – to coordinate the hardscape maintenance work based on schedule 3. Maintenance monitoring – to monitor the hardscape maintenance work as per targeted objectives. 4. Hardscape equipment and machinery monitoring – to identify	<u>Quality Control And Sustainability Supervisor</u> 1. Green procurement handling and identification - to operate registered green vendors, checking on identified green products and services criteria, checking on LCC data, assist in procuring green products and services criteria and monitor receive green products and services. 2. 3R programme implementation – to collect and report on waste data, assist on execution of 3R activities, assist in carrying out awareness program and assist in performing 3R inspection 3. Energy management implementation - to conduct daily toolbox training, carry out training

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOB AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
		the types of equipment's and machineries needed for the hardscape maintenance works 5. Hardscape testing – to test the repaired hardscaped components 6. Workers monitoring and supervising - to manage the planned workers distribution and enforce their safety and wellbeing rules and regulations. To monitor the workers scope and quality of works	programme, collect energy audit data, execute energy savings measures (EMS) and monitor energy related activities. 4. Water management implementation - to collect baseline data of water consumption, collect water reduction performance monitoring programme data, rectify water wastage, perform water savings measures and implement alternative source of water supply. 5. Water management implementation - to collect baseline data of water consumption, collect water reduction performance monitoring programme data, rectify water wastage, perform water savings measures and implement alternative source of water supply. 6. IAQ implementation – to assist in collection of IAQ data, verify equipment functioning and calibrating, assist in conducting IAQ assessment, and execute rectification work.
Level 2	No Job Title	<u>Hardscape Technician / Maintenance Technician</u> 1. Hardscape inspection – to run a routine hardscape inspection based on the report or normal routine inspection.	No Job Title

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOBS AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
		2. Hardscape cleaning – to run the hardscape cleaning 3. Hardscape repairing – to repair or replace the broken or damages hardscape components. 4. Hardscape damages prevention – to prepare and handling all the equipment and materials for hardscape damages preventions. 5. Hardscape tools, machineries and equipment - to prepare and handle tools, machineries, equipment and materials for hardscape maintenance works based on the best practices rules & regulation.	
Level 1	No Job Title	<u>Hardscape Worker / Maintenance Worker</u> 1. Hardscape inspection – to perform a routine hardscape inspection based on the report or normal routine inspection. 2. Hardscape cleaning – to perform the hardscape cleaning	No Job Title

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES		
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES		
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES		
JOBS AREA	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
		3. Hardscape repairing – to perform repairing task of damages hardscape components. 4. Hardscape damages prevention – to perform hardscape damages preventions tasks. 5. Hardscape tools, machineries and equipment - to perform, prepare and handle tools, machineries, equipment and materials for hardscape maintenance works based on the best practices rules & regulation.	

4.4 Occupational Description (OD)

OD is a broad, general, and written statement of a specific job, based on the findings of the job analysis.

The OD within this context refers to the job titles in demand that have been identified as important for the operations of the sector. The OD describes the summary of responsibilities, job level, and competency set such as knowledge, skills and attributes particular to the job. In total, there are 18 jobs titles for N811, 52 jobs titles for N812 and 22 jobs titles for N813. The developed OD of this OF is explained in Annex 4.

4.5 Competencies in Demand

"Competencies in demand" refers to the skills, knowledge, and abilities that are highly sought after in the job market. These are the qualities that employers are looking for in candidates and are necessary to perform the tasks required in a particular job. The competencies in demand vary depending on industry, location, and the current state of the job market. The job skills in demand are ever-changing to reflect the rapid shifts in the way the world works. As new skills become more relevant, others become obsolete.

This section discussed the competency that is currently high in demand in the Services To Buildings And Landscape Activities. Competency in demand is the required or additional ability of a person to perform their job requirement and responsibilities accordingly with the industry requirement. This includes the knowledge, skills and attribute that is required to perform the job.

Knowledge is defined as the understanding of information acquired through education or experience that could be beneficial to perform a task. Skill is the ability to perform specific tasks or activities efficiently and competently. Attribute (Attitude) is related to the quality or characteristic that is important to the task

The competencies in demand under the N81 were discussed and identified during the in-depth interview and FGD, are elaborated as in the Table 4.17.

Table 4.17 Competency in demand and description under the N81 industries.

COMPETENCY IN DEMAND	DESCRIPTION
Knowledge	
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
Administrative	Knowledge of administrative and office procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and workplace terminology.
Botany	Knowledge of plants, including their taxonomy, genetics, physiology, and ecology to ensure the healthy growth of plants
Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
Chemistry	Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.
Cleaning Science	Knowledge of usage of chemical, materials, equipment and method of cleaning
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models
Economics and Accounting	Knowledge of economic and accounting principles and practices, the financial markets, banking, and the analysis and reporting of financial data.
Education and Training	Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Engineering Design	Understand and practise the process of conceptualizing, planning, and developing a solution to a technical problem.
English/Malay Language	Knowledge of the structure and content of the English/Malay language including the meaning and spelling of words, rules of composition, and grammar.
Environmental	Knowledge of sustainable practices and technology
Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

COMPETENCY IN DEMAND	DESCRIPTION
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
Personnel and Human Resources	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
Physics	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.
Production and Processing	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
Project Management	Understand and practise the process of organizing, planning, executing and controlling resources, procedures and protocols to achieve specific goals and objectives within a specified time frame.
Public Safety and Security	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
Sales and Marketing	Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.
Transportation	Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
Skill	
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
Coordination	Adjusting actions in relation to others' actions.
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
Equipment Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
Equipment Selection	Determining the kind of tools and equipment needed to do a job.
Installation	Installing equipment, machines, wiring, or programs to meet specifications.
Instructing	Teaching others how to do something.
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.
Learning Strategies	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
Management of Financial Resources	Determining how money will be spent to get the work done, and accounting for these expenditures.
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.

COMPETENCY IN DEMAND	DESCRIPTION
Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
Negotiation	Bringing others together and trying to reconcile differences.
Operation and Control	Controlling operations of equipment or systems.
Operations Analysis	Analysing needs and product requirements to create a design.
Operations Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.
Persuasion	Persuading others to change their minds or behavior.
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance
Reading Comprehension	Understanding written sentences and paragraphs in work-related documents.
Repairing	Repairing machines or systems using the needed tools.
Science	Using scientific rules and methods to solve problems.
Service Orientation	Actively looking for ways to help people.
Social Perceptiveness	Being aware of others' reactions and understanding why they react as they do.
Speaking	Talking to others to convey information effectively.
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
Systems Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
Time Management	Managing one's own time and the time of others.
Troubleshooting	Determining causes of operating errors and deciding what to do about it.
Writing	Communicating effectively in writing as appropriate for the needs of the audience
Attribute (Attitude)	
Achievement/Effort	Establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
Adaptability/Flexibility	Being open to change (positive or negative) and to considerable variety in the workplace
Analytical Thinking	Analysing information and using logic to address work-related issues and problems.
Attention to Detail	Being careful about detail and thorough in completing work tasks.
Career management	Able to set career goals, explore and identify opportunities for growth and advancement, and continuously working to improve skills, knowledge, and abilities
Concern for Others	Being sensitive to others' needs and feelings and being understanding and helpful on the job
Cooperation	Being pleasant with others on the job and displaying a good-natured, cooperative attitude.
Dependability	Being reliable, responsible, and dependable, and fulfilling obligations.
Independence	Developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
Initiative	Willingness to take on responsibilities and challenges.
Innovation	Creativity and alternative thinking to develop new ideas for and answers to work-related problems.
Integrity	Being honest and ethical.

COMPETENCY IN DEMAND	DESCRIPTION
Integrity	Being honest and ethical.
Leadership	Willingness to lead, take charge, and offer opinions and direction.
Persistence	Persistence in the face of obstacles
Professionalism	A competent, knowledgeable, and skilled in their work in completing a task.
Self-Control	Maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
Social Orientation	Preferring to work with others rather than alone, and being personally connected with others on the job.
Stress Tolerance	Accepting criticism and dealing calmly and effectively with high-stress situations.
Teamwork	Able and willing to collaborate and cooperate between individuals in working together towards completing a goal.

In total, 77 competencies were identified: 25 for knowledge, 32 for skills and 20 for attributes. The listed competencies are very important to all the job titles under the Services To Buildings And Landscape Activities industries and are essential for a graduate or candidate to have in order to be able to perform the job requirement and responsibilities under these industries. However, the level of importance may be differ depending on the job level and requirements.

The list of competencies was then asked in the FGD session to determine which competencies are important to respective industries under the Services To Buildings And Landscape Activities. The result from the FGD was analysed and shown as in Figure 4.1 until Figure 4.3. All the competencies presented in the figures were selected as “very important” by the respondents to their respective group industry (N811, N812 and N813).

4.6 Jobs in Demand and Critical Job

This section provides information on the jobs in demand and the critical jobs in the Services To Buildings And Landscape Activities. Jobs in demand are jobs that are required and important in the smooth running of the main operations of the company. Job in demand by industry definition are the job that required more worker in certain area to meet future IR need, however there is a shortage of workforce supply. Jobs in

demand are important to determine what job titles are demanded by the industry. Meanwhile, the critical jobs are jobs in demand but hard to fill and are always short of supply due to the nature of the jobs which require certain skills set. It is also considered as the strategic occupation of the industry that is critical to the success of the operation implementation.

The job in demand and critical job were identified through the in-depth interview and FGD session where the experts list out the critical job and job in demand for their respective industries. The list of jobs in demand and critical jobs for respective group under the Services To Buildings And Landscape Activities are explained in the Table 4.18 until Table 4.20.

Table 4.18 Jobs in demand and critical jobs under the N811 group

JOB AREA	JOBS IN DEMAND	CRITICAL JOBS
Civil & Structure (C&S)	1. Facility Management Manager C&S 2. Facility Management Executive Facility C&S 3. Facility Supervisor C&S 4. Facility Technician C&S 5. Facility Handyman C&S	1. Facility Management Manager C&S 2. Facility Management Executive Facility C&S 3. Facility Technician C&S 4. Facility Handyman C&S
Mechanical	1. Facility Management Manager Mechanical 2. Facility Management Executive Mechanical 3. Facility Supervisor Mechanical 4. Facility Technician Mechanical	1. Facility Management Manager Mechanical 2. Facility Management Executive Mechanical 3. Facility Supervisor Mechanical 4. Facility Technician Mechanical
Electrical	1. Facility Management Manager Electrical 2. Facility Management Executive Electrical 3. Facility Supervisor Electrical 4. Facility Technician Electrical	1. Facility Management Manager Electrical 2. Facility Management Executive Electrical 3. Facility Supervisor Electrical 4. Facility Technician Electrical
Plumbing	1. Facility Management Manager Plumbing 2. Facility Management Executive Plumbing 3. Facility Supervisor Plumbing 4. Facility Technician Plumbing 5. Plumbing Handyman	1. Facility Management Manager Plumbing 2. Facility Management Executive Plumbing 3. Facility Supervisor Plumbing 4. Facility Technician Plumbing 5. Plumbing Handyman

Table 4.19 Jobs in demand and critical jobs under the N812 group

JOB AREA	JOBS IN DEMAND	CRITICAL JOBS
General Cleaning Of Buildings	1. Building Cleaning Supervisor 2. Building Cleaning Technician 3. Building Cleaning Team Leader 4. Building Cleaning Operator	1. Building Cleaning Supervisor 2. Building Cleaning Technician 3. Building Cleaning Team Leader 4. Building Cleaning Operator
Public Cleaning	1. Public Cleaning Supervisor 2. Public Cleaning Technician 3. Public Cleaning Team Leader 4. Public Cleaning Operator	1. Public Cleaning Supervisor 2. Public Cleaning Technician 3. Public Cleaning Team Leader 4. Public Cleaning Operator
Transportation Cleaning	1. Transport Cleaning Supervisor 2. Transport Cleaning Technician 3. Transport Cleaning Team Leader 4. Transport Cleaning Operator	1. Transport Cleaning Supervisor 2. Transport Cleaning Team Leader 3. Transport Cleaning Operator
Marine And River Cleaning	1. Marine And River Cleaning Supervisor 2. [Marine And River Cleaning Technician 3. Marine And River Cleaning Team Leader 4. Marine And River Cleaning Operator	1. Marine And River Cleaning Technician 2. Marine And River Cleaning Team Leader 3. Marine And River Cleaning Operator
Health Care Cleaning	1. Hospital Cleaning Supervisor 2. Hospital Cleaning Technician 3. Hospital Cleaning Team Leader 4. Hospital Cleaning Operator	1. Building Cleaning Manager 2. Hospital Cleaning Supervisor 3. Hospital Cleaning Technician 4. Hospital Cleaning Team Leader 5. Hospital Cleaning Operator
Kitchen Cleaning	1. Kitchen Cleaning Team Leader 2. Kitchen Cleaning Operator	1. Kitchen Cleaning Supervisor 2. Kitchen Cleaning Technician 3. Kitchen Cleaning Team Leader 4. Kitchen Cleaning Operator
Oil & Gas Cleaning	-	1. Oil & Gas Cleaning Supervisor 2. Oil & Gas Cleaning Technician
Heritage Cleaning	1. Heritage Cleaning Technician	1. Heritage Conservator 2. Heritage Assistant Conservator 3. Heritage Cleaning Supervisor 4. Heritage Cleaning Technician
External High Rise Building Cleaning	1. External High Rise Building Cleaning Supervisor 2. External High Rise Building Cleaning Technician	1. Building Cleaning Manager 2. Building Cleaning Executive 3. External High Rise Building Cleaning Supervisor 4. External High Rise Building Cleaning Technician
Sertu Services	-	1. Sertu Services Technician

Table 4.20 Jobs in demand and critical jobs under the N813 group

JOB AREA	JOBS IN DEMAND	CRITICAL JOBS
Landscape Design / Redesign / Upgrading	1. Design Coordinator	1. Landscape Manager / Landscape Architect 2. Landscape Executive / Landscape Designer 3. Design Coordinator
Garden, Park And Landscape Operations And Maintenance	1. Maintenance Technician 2. Maintenance Worker	1. Landscape Operations Manager 2. Landscape Operations Executive 3. Landscape Operations Supervisor 4. Maintenance Technician
Landscape Turf Maintenance	1. Field Executive 2. Field Team Leader / Assistant Greenkeeper	1. Field Maintenance Manager 2. Field Executive 3. Field Team Leader / Assistant Greenkeeper 4. Lawn Care Worker / Landscaper
Tree Care	1. Landscape Operations Manager / Arborist / Horticulturist 2. Landscape Operations Executive / Assistant Arborist / Assistant Horticulturist	1. Landscape Operations Manager / Arborist / Horticulturist 2. Landscape Operations Executive / Assistant Arborist / Assistant Horticulturist
Hardscape Maintenance	1. Hardscape Technician/ Maintenance Technician 2. Hardscape Worker / Maintenance Worker	1. Hardscape Executive 2. Hardscape Supervisor 3. Hardscape Technician/ Maintenance Technician
Sustainable Landscape Management	1. Quality Control and Sustainability Manager 2. Quality Control and Sustainability Executive 3. Quality Control and Sustainability Supervisor	1. Quality Control and Sustainability Manager 2. Quality Control and Sustainability Executive 3. Quality Control and Sustainability Supervisor

The jobs in demand in the tabulated tables are listed based on the job titles and areas derived in the developed OS from the industries' experts. There are a total of 55 overall jobs in demand under the Services To Buildings And Landscape Activities managed to be listed based on the FGD session result (N811 – 18 jobs in demand, N812 – 25 jobs in demand and N813 – 12 jobs in demand). Meanwhile, there are a total of 70 overall critical jobs titles under the Services To Buildings And Landscape Activities industries managed to be listed based on the FGD session result (N811 – 17 critical jobs, N812 – 34 critical jobs and N813 – 19 critical jobs).

In addition, data from the experts from in-depth interview and FGD session have identified the contributing factors to the shortage of jobs in demand in the industries.

The explanations are as follow:

- 1) The current graduates, trainees, apprentices, and current workers doesn't possess the skills required by the industry.
- 2) Education or training mismatch
- 3) Major changes in traditional training and new skills requirements
- 4) Poor attitude of graduates, trainees, apprentices, and current workers for example, lack of desire to work
- 5) Misalignment between how job seekers are communicating their skills in their Curriculum Vitae (CV)
- 6) Employers do not clarify the skills they require in the job specifications in the job advertisement.

Specific to Group 811: Combined Facilities Support Activities, contributing factors to the shortage of jobs in demand in the industries to following explanations:

- 1) The building itself becomes more dynamic, i.e., a green building.
- 2) Skill workers tend to do easier jobs not related to their training.
- 3) Lack of communication skill. Encouraging the new generation to choose the technical field and the learning process needs to be improved by providing direct exposure to the real situation.
- 4) Poor fundamental understanding and academic background of FM.
Alignment thru national direction for FM by CIDB
- 5) Level 1-3 easy to be outsourced as although they are the results of the Technical and Vocational Education and Training (TVET) institutions, the industry preferred workers who are well-versed in the technical aspects of the job.

Specific to Group 812: Cleaning Activities, contributing factors to the shortage of jobs in demand in the industries to following explanations:

- 1) Job seekers are not motivated to acquire the required skills due to unattractive compensation scheme.
- 2) Lack of training institutions that offer courses related to cleaning.
- 3) Locals are not attracted to work as cleaners due to cleaning job is categories under Dirty, Difficult, Dangerous & Demeaning (4D)
- 4) The profession is not attractive and deemed to be associated with dropouts.
- 5) Society's perception of the job contributes largely to the low take up for cleaning jobs.
- 6) Lack of recognition of the importance towards the cleaning industry
- 7) Not actively promoted.

Specific to Group 813: Landscape Care And Maintenance Service Activities, contributing factors to the shortage of jobs in demand in the industries to following explanations:

- 1) Not adequate benefit and remuneration between jobs needed.
- 2) No clear distinction between skill-based needs and management needs
- 3) Less jobs required in industry.

4.7 Emerging Skills

Emerging skills refer to new or rapidly evolving abilities and competencies that are in high demand in the job market due to technological advancements, changes in the global economy, and other factors. These skills are typically related to new technologies or digital transformation, data analysis, design thinking, and cross-cultural collaboration, among others. Emerging skills are seen as key drivers of innovation and competitiveness, and individuals and organizations who have them are better equipped to adapt to the changing demands of the workplace.

In today's rapidly changing job market, it is crucial to keep pace with the emerging skills and trends to remain competitive and relevant. This section presents the research findings on identification of future emerging skills that affect and/or required for the industry, reasons for the need of this emerging skills requirement and recommendation or suggestion for this emerging skills requirement. The response from FGD session and in-depth interview in regard emerging skills for Services To Buildings And Landscape Activities tabulated in Table 4.21. In general, most FGD and in-depth interview panel members provide their opinion on the future emerging skills. Since most of them are proposing for similar emerging skills, their opinions are merged and explained as shown in the table.

Table 4.21 Future emerging skills, reason and recommendation

Future Emerging Skills	Reasons For The Need Emerging Skills	Recommendation For Emerging Skills Requirement
Group 811: Combined Facilities Support Activities		
• IoT integration, Sustainable building (green building), climate-related issues to building • Ability to use software compatible with BIM, Landscape Information Modelling (LIM) • Critical thinking and problem solving • Complex problem-solving skill, advanced data analytics, cybersecurity, emotional intelligence, digital marketing, project management, remote collaboration, design thinking, sustainability, and adaptability • Adoption of Technology IR Green Technology	• This emerging skill will result in quality services in the building and its facilities. • Future maintenance work will require BIM knowledge. • These skills involve analyzing information, evaluating situations, and making informed decisions. They are valuable across various FM activities. • Ability to adapt to unexpected changes within organization • Globalisation	• Provide easy access to these emerging skills, especially for school leavers. Overseas exposure for university students, at least to Singapore. • To increase training facilities for BIM and LIM • Embrace a mindset of continuous learning. The world is constantly changing, so commit to ongoing education and skill development. • Effective management • Alignment with best practices • IR emerging skill is yet to be study by industry regulation organisation, but it is in need
Group 812: Cleaning Activities		
• Digitalisation and new innovation/technological based skills that commensurate with	• To provide new image to the grade and contents of the jobs in question (upgrade industry image) • Adoption of IR4	• Paperless data collection, monitoring of operation and analysis of performance via the IoT and objective evaluation of performance or

Future Emerging Skills	Reasons For The Need Emerging Skills	Recommendation For Emerging Skills Requirement
attractive compensation schemes • Automation and robotic • Digitalization System • Artificial Intelligent (AI) • Cleaning Technician • Ability to accrue knowledge in technology • Computer skills • Adaptability of latest IoT system • Actuary – mathematical and statistical theories to measure future risk and potential cost	• Increased productivity and quality of work • Cleaning contract based on performance • Increase efficiencies of cleaning and reduce high dependency on unskilled workers • Incorporation of automation and new machines • to transform cleaning industry to more technology driven • Cleaning is moving towards automation, robotic and digitilazation	compliance to the Service Level Agreement via digitalisation of processes and verifications • Government to provide grant for upskilling training on automation and robotic and digitalization. • To relate directly the cleaning training with Environment, Social and Governance (ESG) • Simplified computer knowledge so that it is easily adapted by general workers. • Background on technologies and software • The adaptation of technology in cleaning industry will reduce the dependency on labor, increase on quality of job, time saving and help to manage the cost better. Further more it will help to collect data which will be useful for analytical purposes • Training in related to automation, robotic and IoT in cleaning industry. • Create career path and awareness. • Implement structured training program's that link with the progressive wage.
Group 813: Landscape Care And Maintenance Service Activities		
• Leadership, strategic and critical thinking for management and business purposes • Visualization of idea to implementation of landscape development • Embedding elements of science behind design, maintenance and aspect of decision making.	• Problems and issues becoming more complex • Ability to come up with new ideas and solutions and display enterprising capabilities on your own without being instructed • Application-base is important rather than theoretical	• Broad and thinking based education • Promote awareness on critical subject matters • Provide strong scientific analysis for problem solution • On-site training and systematic measurement on achievement and impact

Future Emerging Skills	Reasons For The Need Emerging Skills	Recommendation For Emerging Skills Requirement
	• Changes in financial and economic scenario, supply and demand	

The findings help to shed light on the skills that are becoming increasingly important in the job market and provide valuable insights for job seekers, employers, and policy makers. This section will also contribute to the ongoing discourse on the future of work and skill development and help inform training and professional development programs aimed at promoting the growth and competitiveness of the workforce.

4.8 Job Relevant to Industrial Revolution

The integration of technology in industrial relations is driving significant changes in the job market and creating new job opportunities. As the technology grows rapidly, it is likely to foresee the future occupation will be more automated especially with the introduction of AI, robotics and what not. IR has significantly improved manufacturing industries especially on production volume, lead time, accuracy and efficiencies. However, it does affect towards reducing manpower and high maintenance.

This matter is discussed in the FGD and in-depth interview, and were agreed among the experts that the technologies and IR impact directly towards the Services To Buildings And Landscape Activities. However, not all job levels are affected by it. Following to the FGD discussion, the issue was brought to the in-depth interview and the result is discussed as in Figure 4.1 and Figure 4.2.

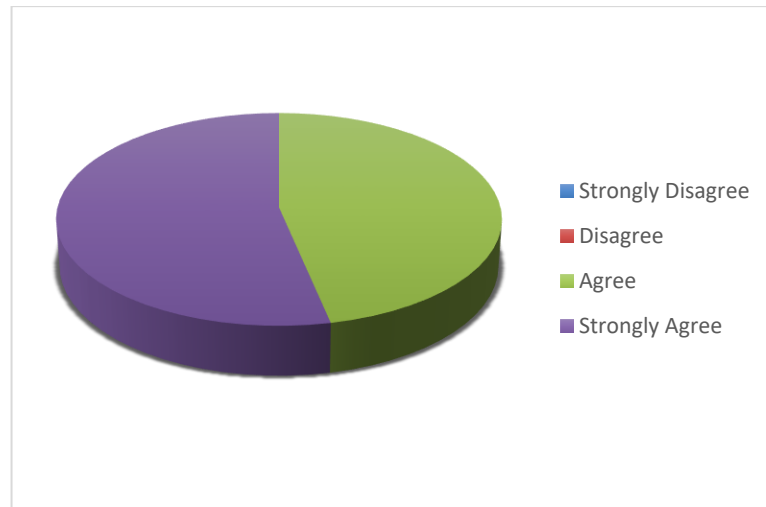


Figure 4.1 The IR Impact on N81 Services To Buildings And Landscape Activities

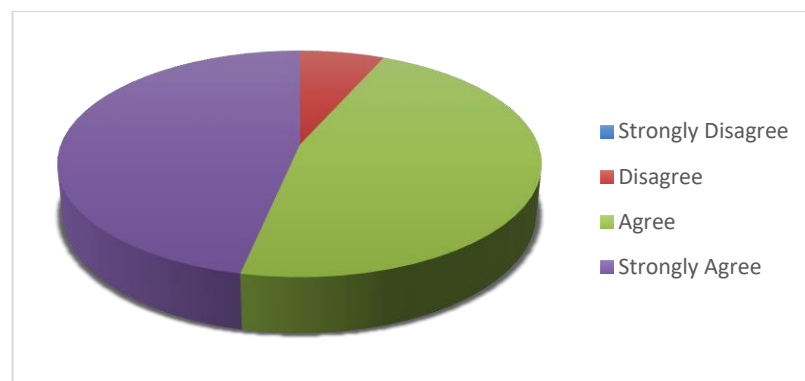


Figure 4.2 Technology Advancement Affects The Jobs On N81 Services To Buildings And Landscape Activities

Vast majority of FGD and in-depth interview agreed that the IR will impact directly to the Services To Buildings And Landscape Activities industries. IR provides better lead time with lower cost, while improve efficiencies, less manpower needed, less human error, improve product quality, simulation made easier, prototype more accurate, and improve productivity. However, majority of them also agreed that the technology advancement may affect their job in the industries in future.

Specific to Group 811: Combined Facilities Support Activities, reason on how IR advancement will impact the industries to following explanations:

- 1) Activities in smart buildings and their facilities will be decided by IoT and the automation system.
- 2) Work that in the past was executed by men, especially monitoring tasks, will be replaced by machine equipment with artificial intelligence (AI).
- 3) Automation technologies, such as building management systems (BMS) and IoT devices, have enabled facilities to be managed more efficiently. These systems can monitor and control various aspects of a building, including heating, ventilation, lighting, and security, leading to energy savings and cost reductions.
- 4) Technological advancements have provided facility managers with tools to collect and analyze vast amounts of data. This data-driven approach helps in making informed decisions about resource allocation, maintenance schedules, and space utilization.
- 5) The IR led to increased industrialization and urbanization, which often resulted in environmental challenges. Technology has allowed facility managers to implement sustainable practices, monitor environmental metrics, and ensure compliance with regulations.
- 6) Technological advancements in communication and connectivity have enabled facility managers to remotely monitor and manage facilities. This is especially valuable for managing multiple sites or responding to issues quickly without the need for physical presence.
- 7) Advances in technology, such as sensors and occupancy tracking systems, have improved the understanding of how spaces are used within facilities. This information helps optimize space utilization, reduce waste, and enhance user experiences.
- 8) New machines, new power sources, and new ways of organizing work made existing industries more productive and efficient.
- 9) Technology is one 4 pillars in FM. Impact on performance

Specific to Group 812: Cleaning Activities, reasons on how IR advancement will impact the industries are explained below:

- 1) Increase productivity and efficient delivery systems and enhanced job scopes/occupation.
- 2) Technical and computer competency will become important as the industry shifts towards IR and Technology advancement.
- 3) Cleaning contractors will be more tech savvy
- 4) It will improve the efficiencies of cleaning and attract more local workers

Specific to Group 813: Landscape Care And Maintenance Service Activities, reasons on how IR advancement will impact the industries are explained below:

- 1) Tools and automation will take place replacing human skills
- 2) Critical thinking to suit job scope and meet the target/dateline
- 3) Information and data analytic for decision making
- 4) Cost and task effectiveness influence the industry

Nevertheless, the response by experts from FGD explained that not all industries under the Services To Buildings And Landscape Activities are capable and ready to optimise their technologies and believe that technology only enhanced or added value to industry, but will not replace.

On the other hand, Figure 4.3 shows the IR nine (9) pillars that are relevant to the industries under the Services To Buildings And Landscape Activities based on the responses of the FGD2. The result shows that all IR pillars are essential, important and will give an impact to all industries now and in the future.

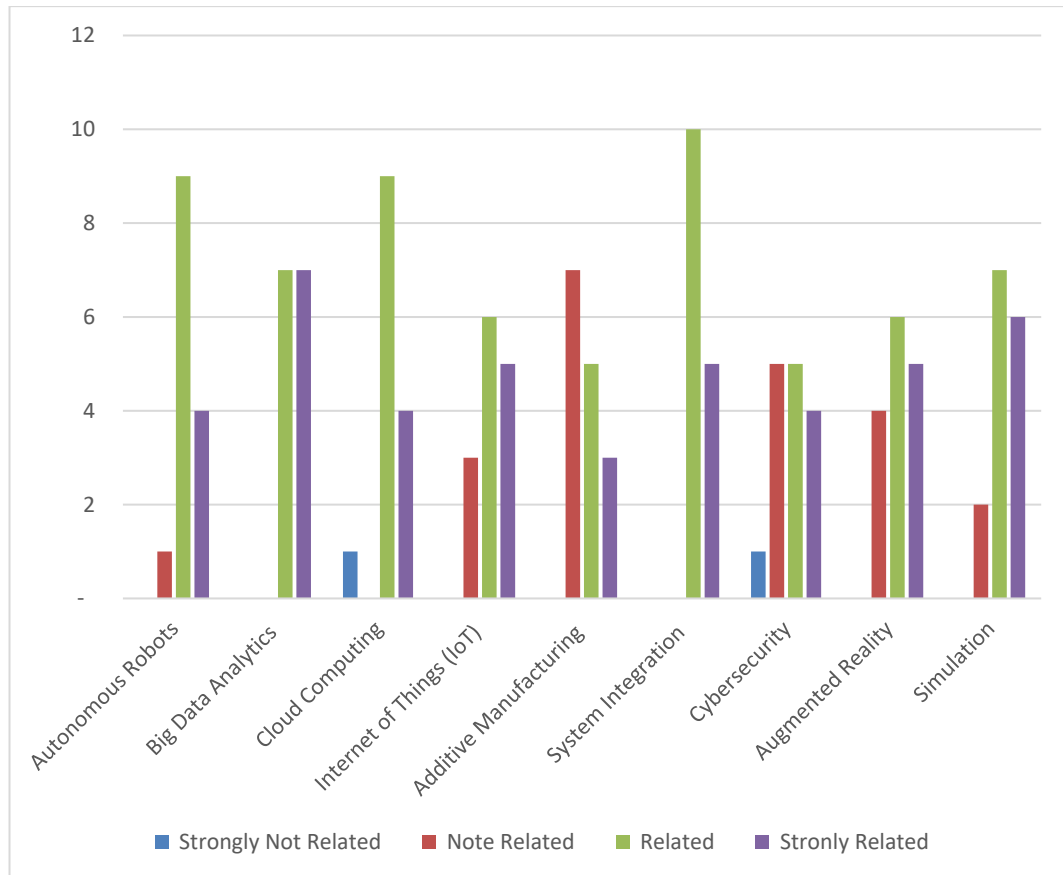


Figure 4.3 IR pillar that are relevant to the industries under the N81 Services To Buildings And Landscape Activities

From the graph, it shows that the Autonomous Robots, Big Data Analytics, Cloud Computing, System Integration and Simulation are the pillars that are very important to all N81 industries. However, data also showed that Additive Manufacturing and Cybersecurity are the least important to N81 group.

4.9 Issues related to N81 Services To Buildings And Landscape Activities

The N81 Services To Buildings And Landscape Activities is an important sector of the economy, contributing to the development and growth of various industries. However, this sector faces various challenges and issues that need to be addressed to ensure its sustainability and competitiveness. This section aims to shed light on the key issues related to the N81 Services To Buildings And Landscape Activities and identify

possible solutions to overcome them. This analysis will provide valuable insights into the challenges faced by this sector and help inform policy decisions aimed at promoting its growth and development. Ultimately, this will contribute to the improvement of the overall economic performance and competitiveness of the country. Issues related to N81 Services To Buildings And Landscape Activities industries were discussed during the in-depth interview and further verified during FGD 2 session. Figure 4.4 shows the issues related to respective industries under the N81 Services To Buildings And Landscape Activities based on the responses of the FGD 2 panel. All N811, N812 and N813 group show a consistent result in which the issues are more to insufficient number of skilled workers, insufficient number of certified workers, insufficient number of competence workers, high dependence on foreign labour and talent gap among graduates.

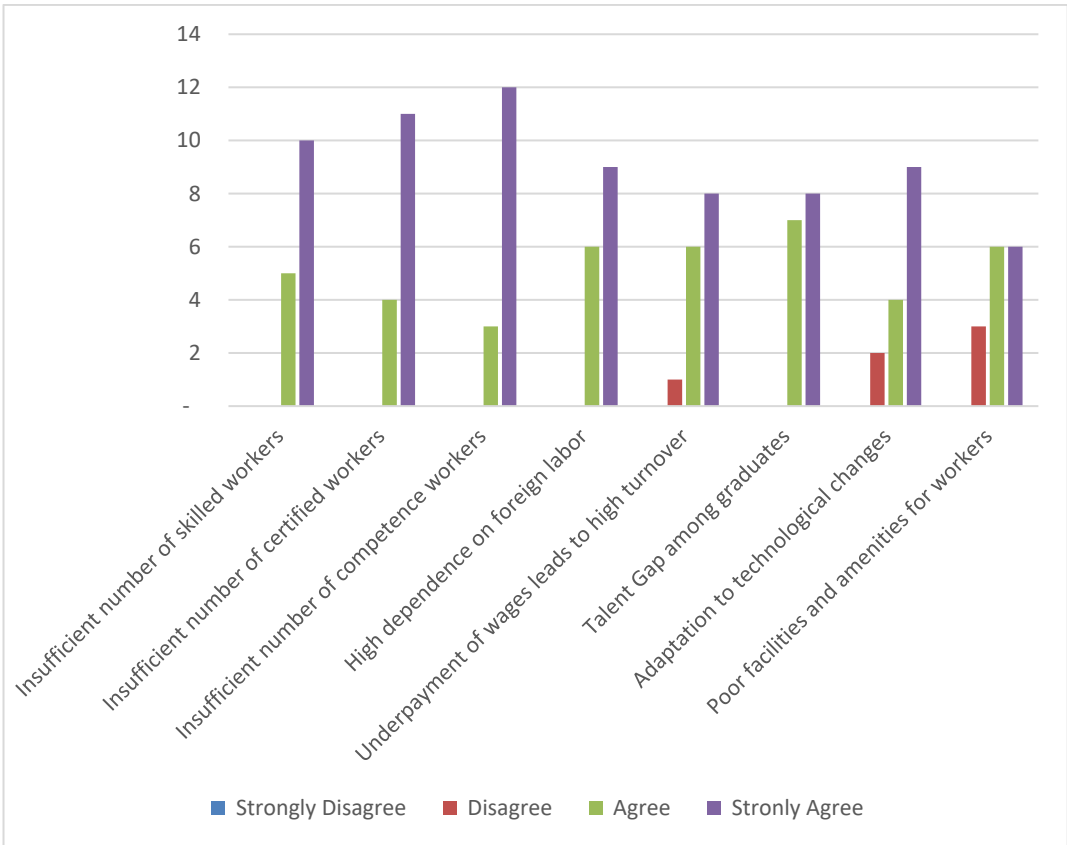


Figure 4.4 Issues related to N81 Services To Buildings And Landscape Activities

The response from FGD session and in-depth interview on other issues affecting the workforce for each N811, N812 and N813 group of Services To Buildings And Landscape Activities tabulated in Table 4.22. In addition, most FGD and in-depth interview panel provide their recommendation and suggestion to some most prevailing issues affecting the workforce of the industry, explained as shown in the table.

Table 4.22 Other issues and recommendation related to N81 Services To Buildings And Landscape Activities workforce

Other Issues Affecting The Workforce	Recommendation And Suggestion For Prevailing Issues
Group 811: Combined Facilities Support Activities • Learning institutions need to make their syllabus dynamic or change it according to current demands (IoT and automation in buildings) as well as climate change issues. • opportunity to have a higher salary when you move to another company or job. • Aging workforce: The FM industry, like many others, is dealing with an aging workforce. Many experienced professionals are approaching retirement age, creating a need for succession planning and knowledge transfer. • Sustainability initiatives: As sustainability becomes a more significant concern, FM professionals need to be knowledgeable about green building practices, energy-efficient technologies, and renewable energy sources. • Training and development: Keeping up with rapidly evolving technology and best practices in FM can be a challenge. Employers need to invest in ongoing training and development programs for their workforce. • Challenges related to employee motivation. Training methods that don't meet workforce needs.	
	• Basically, we are still affected by COVID-19 issues. Second, the government needs to monitor the employer or business owner in terms of wages. The third government need to have some mechanism in controlling foreign workers (only allow skilled workers) • To make sure workers are loyal, there must be a clear path for career development in the company or current job. • Technology integration: Embrace digital transformation by investing in advanced technologies like IoT sensors, AI, and data analytics. These tools can help in predictive and prescriptive maintenance, energy optimization, and better decision-making. • Sustainability: Sustainability is increasingly important. Incorporate sustainable practices like energy-efficient systems, waste reduction, and green building standards into FM operations. This can reduce costs and attract environmentally-conscious clients especially Public Listed Company in Green Reporting in core business and non-core business. • Quality management: Implement quality management programs to ensure that work is consistently performed to high standards. This can lead to client satisfaction and long-term contracts such as ISO process lead to high quality services and high client satisfaction. • Client engagement: Build strong relationships with clients by actively seeking feedback and regularly communicating updates on facility performance and maintenance. This can lead to long-term partnerships and referrals.

Other Issues Affecting The Workforce	Recommendation And Suggestion For Prevailing Issues
	• Develop good relationship and/or partnership with vendor management is equally important as client engagement in sharing information. • Data-driven decision making: Use data analytics to make informed decisions about maintenance schedules, resource allocation, and efficiency improvements. This can help FMs optimize operations and reduce costs. • Regulatory compliance: Stay up-to-date with relevant regulations and compliance requirements. Failure to comply can result in costly penalties and damage to client's reputation • Effective job performance reviews; Two-way communication; Control of Discrimination; Increase motivation and job satisfaction;
Group 812: Cleaning Activities	
• Image of cleaners as the lowest category of workers. • Low society perception of cleaners. • Locals are not attracted to work as cleaners due to cleaning job is categories under 4D • Negative reports on treatment of cleaners by irresponsible contractors, not paying the salary on-time, not contributing to EPF, SOCSO, HRDF, PIS, and no paid annual and medical leave • Acknowledgement / Lack of recognition - from governing authority and client • Lack of training and career advancement	• Cleaning has been perceived as a job with lowest skills and no future. Promoting training will help to change the negative perception. • Institution of higher learning should introduce courses on cleaning, if possible offering a degree in cleaning management. • Cleaners should be paid a higher salary with skill incentives based on their competency. • Cleaning contract to be offered minimum five years rather than yearly • Training development to tie with the productivity link wage system (PLWS) • To register as cleaning contractors, they must have the relevant certification or experienced • Training must be made compulsory and allocation for training to be part of cost of contract • Government to provide training grants especially for SME's. • Cleaning is for everyone because it affects all • Development of skill training – SKM
Group 813: Landscape Care And Maintenance Service Activities	
• Absence of the law to govern the specific jobs. • Mismatch on skill, jobs and remuneration	• To improve understanding on the scope and skills of landscape industries players. • To promote safety measures for workers and public in landscape operations • To increase opportunities and skills for career development in landscape industries

In conclusion, several challenges faced by the N81 Services To Buildings And Landscape Activities workforce. These challenges include a shortage of competent and

skilled workers, issues with wages and turnover rates, and inadequate facilities and amenities for workers. Addressing these issues could help to improve the overall productivity and sustainability of the industry.

4.10 Mapping OS to Available NOSS

In today's rapidly changing job market, it is crucial to align occupational structures with the current NOSS. This section aims to map the occupational structure identified in the research findings with the NOSS to provide a comprehensive understanding of the skills and competencies required for each job title. The mapping of the occupational structure with the NOSS will provide valuable insights into the current job market and help identify the skills gap that needs to be addressed through skill development and training programs. This will ultimately contribute to the growth and competitiveness of the workforce and the economy as a whole.

Table 4.23 until Table 4.26 shows the mapping of the developed OS to the current existing NOSS.

Table 4.23 Existing NOSS mapped with N811 OS

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES			
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES			
GROUP	(811) COMBINED FACILITIES SUPPORT ACTIVITIES			
JOBS AREA	CIVIL & STRUCTURE (C&S) SERVICE	MECHANICAL SERVICE	ELECTRICAL SERVICE	PLUMBING SERVICE
LEVEL 8	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT
LEVEL 5	Facility Management Manager C&S*** Perancangan Pengurusan Fasilitas (N811-002-5:2018)	Facility Management Manager Mechanical*** Perancangan Pengurusan Fasilitas (N811-002-5:2018)	Facility Management Manager Electrical*** Perancangan Pengurusan Fasilitas (N811-002-5:2018)	Facility Management Manager Plumbing*** Perancangan Pengurusan Fasilitas (N811-002-5:2018)
LEVEL 4	Facility Management Executive C&S*** Pemantauan Pengurusan Fasilitas (N811-002-4:2018)	Facility Management Executive Mechanical*** Pemantauan Pengurusan Fasilitas (N811-002-4:2018)	Facility Management Executive Electrical*** Pemantauan Pengurusan Fasilitas (N811-002-4:2018)	Facility Management Executive Plumbing*** Pemantauan Pengurusan Fasilitas (N811-002-4:2018)
LEVEL 3	Facility Supervisor C&S*	Facility Supervisor Mechanical***	Facility Supervisor Electrical***	Facility Supervisor Plumbing***
LEVEL 2	Facility Technician C&S***	Facility Technician Mechanical***	Facility Technician Electrical***	Facility Technician Plumbing***
LEVEL 1	Facility Handyman C&S***	NJT	NJT	Plumbing Handyman***

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.24 Existing NOSS mapped with N812 OS (1/2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES				
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES				
GROUP	(812) CLEANING ACTIVITIES				
JOBS AREA	GENERAL CLEANING OF BUILDINGS SERVICE	PUBLIC CLEANING SERVICE	TRANSPORTATION CLEANING SERVICE	MARINE AND RIVER CLEANING SERVICE	HEALTH CARE CLEANING SERVICE
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Building Cleaning Manager Pengurusan Operasi Cleaning (HT-070-5:2012)	Public Cleaning Manager	Transportation Cleaning Manager	Marine And River Cleaning Manager	Building Cleaning Manager**
LEVEL 4	Building Cleaning Executive Pengurusan Operasi Cleaning (HT-070-4:2012)	Public Cleaning Executive	Transportation Cleaning Executive	Marine And River Cleaning Executive	Building Cleaning Executive
LEVEL 3	Building Cleaning Supervisor*** Operasi Cleaning (HT-070-3:2014)	Public Cleaning Supervisor***	Transport Cleaning Supervisor***	Marine And River Cleaning Supervisor*	Hospital Cleaning Supervisor***
	Building Cleaning Technician***	Public Cleaning Technician***	Transport Cleaning Technician*	Marine And River Cleaning Technician***	Hospital Cleaning Technician***
LEVEL 2	Building Cleaning Team Leader*** Operasi Cleaning (HT-070-2:2014)	Public Cleaning Team Leader***	Transport Cleaning Team Leader***	Marine And River Cleaning Team Leader***	Hospital Cleaning Team Leader***
LEVEL 1	Building Cleaning Operator***	Public Cleaning Operator***	Transport Cleaning Operator***	Marine And River Cleaning Operator***	Hospital Cleaning Operator***

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.25 Existing NOSS mapped with N812 OS (2/2)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES				
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES				
GROUP	(812) CLEANING ACTIVITIES				
JOBS AREA	KITCHEN CLEANING SERVICE	OIL & GAS CLEANING SERVICE	HERITAGE CLEANING SERVICE	EXTERNAL HIGH RISE BUILDING CLEANING SERVICE	SERTU SERVICES
LEVEL 8	NJT	NJT	NJT	NJT	NJT
LEVEL 7	NJT	NJT	NJT	NJT	NJT
LEVEL 6	NJT	NJT	NJT	NJT	NJT
LEVEL 5	Kitchen Cleaning Manager	Oil & Gas Cleaning Manager	Heritage Conservator**	Building Cleaning Manager**	Sertu Services Manager
LEVEL 4	Kitchen Cleaning Executive	Oil & Gas Cleaning Executive	Heritage Assistant Conservator**	Building Cleaning Executive**	Sertu Services Executive
LEVEL 3	Kitchen Cleaning Supervisor**	Oil & Gas Cleaning Supervisor**	Heritage Cleaning Supervisor**	External High Rise Building Cleaning Supervisor***	Sertu Services Supervisor
	Kitchen Cleaning Technician**	Oil & Gas Cleaning Technician**	Heritage Cleaning Technician***	External High Rise Building Cleaning Technician***	Sertu Services Technician** Perkhidmatan Sertu (HI-011-3:2016)
LEVEL 2	Kitchen Cleaning Team Leader***	NJT	NJT	NJT	NJT
LEVEL 1	Kitchen Cleaning Operator****	NJT	NJT	NJT	NJT

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Table 4.26 Existing NOSS mapped with N813 OS

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES					
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES					
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES					
JOBS AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
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	Landscape Manager / Landscape Architect**	Landscape Operations Manager**	Field Maintenance Manager**	Landscape Operations Manager /Arborist / Horticulturist*** Horticulturist (HT-085-3) Pengurusan Dan Operasi Arborikultur (N813-003-5:2019)	NJT	Quality Control and Sustainability Manager*** Pengurusan Kemampanan (LE-039-5:2014)
Level 4	Landscape Executive / Landscape Designer**	Landscape Operations Executive**	Field Executive***	Landscape Operations Executive /Assistant Arborist / Assistant Horticulturist*** Assistant Horticulturist (HT-085-2) Operasi Arborikultur (N813-003-4:2019)	Hardscape Executive**	Quality Control and Sustainability Executive*** Pengurusan Kemampanan (LE-039-4:2014)

SECTION	(N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES					
DIVISION	(81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES					
GROUP	(813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES					
JOBS AREA	LANDSCAPE DESIGN / REDESIGN / UPGRADING SERVICE	GARDEN, PARK AND LANDSCAPE OPERATIONS AND MAINTENANCE SERVICE	LANDSCAPE TURF MAINTENANCE SERVICE	TREE CARE SERVICE	HARDSCAPE MAINTENANCE SERVICE	SUSTAINABLE LANDSCAPE MANAGEMENT SERVICE
Level 3	Design Coordinator***	Landscape Operations Supervisor** Penyeliaan Penyelenggaraan Taman (LE-020-3:2011)	Field Supervisor / Greenkeeper Greenkeeper (HT-084-3)	NJT	Hardscape Supervisor**	Quality Control and Sustainability Supervisor*** Operasi Kemampanan (LE-039-3:2014)
Level 2	NJT	Maintenance Technician*** Operasi Penyelenggaraan Taman (LE-020-2:2011)	Field Team Leader / Assistant Greenkeeper*** Assistant Greenkeeper (HT-084-2)	NJT	Hardscape Technician / Maintenance Technician***	NJT
Level 1	NJT	Maintenance Worker* Operasi Penyelenggaraan Taman (LE-020-1:2011)	Lawn Care Worker / Landscaper** Groundsman (HT-084-1)	NJT	Hardscape Worker/ Maintenance Worker*	NJT

NJT – No Job Title / * Jobs in Demand / ** Critical Jobs / *** Critical Jobs & Jobs in Demand

Currently, there are 20 NOSS that has been developed that are categorized under N81 group, while 13 NOSS that has been developed that are not categorized under the N81 group but relevant to N81 group, shown in Table 4.27.

In N811, there are 2 NOSS that are related to a 10 OS job title (see Table 4.23 Existing NOSS mapped with N811 OS). This due the existing 2 NOSS (Perancangan Pengurusan Fasilitas - N811-002-5:2018 and Pemantauan Pengurusan Fasilitas - N811-002-4:2018) are generic job titles whereas the 10 OS job develop based on the job areas. In N813, there are 4 NOSS that are related to a 2 OS job title (see Table 4.26: Existing NOSS mapped with N813 OS). This is due to the developed NOSS that is focused on a specific job scope whereas the job title under the OS is covering the services of all activities under the N81 groups. Additionally, in N813, two NOSS jobs titles (Horticulturist - HT-085-3 and Assistant Horticulturist - HT-085-2) was upgraded from competency Level 3 and 2 to OS jobs titles competency Level 4 and 5. Nevertheless, there is a need to develop the NOSS document for the critical job titles listed in the OS.

Table 4.27 Overall Job Areas and Titles in N81 Services To Buildings And Landscape Activities

Group	Developed OS Job Titles	Existing NOSS Job Titles	NOSS Mapped with OS Job Titles	Balance NOSS Not Mapped (but related) with OS Job Titles
Group 811: Combined Facilities Support Activities	18	11	2	9
Group 812: Cleaning Activities	52	5	5	-
Group 813: Landscape Care And Maintenance Service Activities	22	17	13	4
TOTAL	92	33	20	13

4.11 Conclusion

In conclusion, this chapter provides a comprehensive analysis of the occupational structure, responsibilities, and descriptions of various job titles. The findings from the document review, FGD and in-depth interview provide a detailed understanding of the job market and the skills that are in demand. The critical competencies and skills related to IR and technology were also identified, highlighting the importance of digital literacy in today's job market. The presentation of emerging skills highlights the need for continuous professional development to stay ahead in the ever-evolving job market. Overall, the research findings provide valuable insights for job seekers, employers, and policy makers, and contribute to the ongoing discourse on the future of work and skill development.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND

CONCLUSION

5.1 Introduction

The objective of this chapter is to provide a comprehensive discussion, recommendations, and conclusion based on the findings of the study on the OS for the N81 Services To Buildings And Landscape Activities sector. This study aimed to establish the OS based on MSIC 2008, by examining job areas, job titles, and relevant competency level, determining OR that outline the main work activities and tasks for each job title, determining OD for each job title in demand based on the proposed OS, identifying critical job titles, and relate IR technology relevancy and impact towards jobs titles in the N81 Services To Buildings And Landscape Activities sector.

To achieve these objectives, DDR research methodology was employed using multiple data collection techniques, including document review, FGD and in-depth interview. The findings of this study will provide insights into the occupational structure, responsibilities, and descriptions for the Services To Buildings And Landscape Activities sector, which can be used to guide workforce planning, training and development, recruitment and retention, and other human resource management practices.

This chapter will present a discussion of the study's key findings, including the establishment of the occupational structure, responsibilities, and descriptions for each group in the Services To Buildings And Landscape Activities sector. The chapter will also provide recommendations based on the study's findings, including the identification of critical job titles and IR relevancy to job titles. Finally, this chapter

will present conclusions and contributions of the study to the field of workforce development in the Services To Buildings And Landscape Activities sector.

5.2 Discussion

The discussion in this section will be organized according to the research questions, with each question being addressed separately.

5.2.1 Objective 1: To identify the relationship between previous studies with current and future industrial needs

The growth of construction industry is hand in hand with FM. The government which encompasses 20% of nation procurer for construction which will be worth at RM70 billion of construction work investment. The other 80% of the industry investment will be from private sector namely residential and commercial construction. These sectors will be managed by N81 – building and landscape maintenance activities. Facilities construction for a specific purpose shall be operationalised for at least more than few decades to maximise the financial investment. The N81 will enhance this investment of facilities which is said to be at least double the worth of investment to the socioeconomic growth of the nation, generally. The finding from the FGD and in-depth interview identify current and future needs of the N81 industry, shown in Table 5.1.

Table 5.1 Current and future industrial needs

Group	Current	Future
N811 Combined Facilities Support Activities	- Commercial and Retail - Energy Control Building Operation - O&M of Building - Building Operation - Facility Management	- Civil & structure - Mechanical - Electrical - Information, Computer & Technology
	- The current OF of N811 are not structured although framed under the IR - This is also found during interview with practitioner as there is low awareness of support activities and structure of operation in administration and site works	- The future N811 is planned by building elemental analysis as continuity for construction management during construction stage. It is a continuity of intended design and construction and should be maintained as it is intended. - BIM and Industrialised Building System (IBS) as technology would believe shall take place some of the analysis made by supervisory works - IR is still having a slow stake up or at least still very infancy in construction industry more or less in combined facilities.
N812 Cleaning Activities	- Cleaning Operation - Sertu Service	- General Cleaning of Building - Public Cleaning - Transportation Cleaning - Marine & River Cleaning - Healthcare Cleaning
	- Lump sum of all operation for cleaning - The job title related to cleaning is vast in number which need to be rearranged	- Cleaning as interdisciplinary field between building and landscape area maintenance. - This finding is supported by the interview session especially in commercial and residential sector. - Future trend could include the needed job area that intersect between building and landscape especially in technology such as BIM and Landscape Information Modelling (LIM) - Typical machineries and equipment is needed but as building and construction material and system innovate, cleaning works need to be slowly evolve too.
N813 Landscape Care & Maintenance Service Activities	- Park maintenance - Playground design - Sustainable management - Arboriculture operation - Greenkeeper - Horticulture	- Landscape Design/Redesign/Upgrading - Garden, Park and Landscape O&M - Tree Care - Hardscape Maintenance - Sustainable Landscape Management
	Current landscape care and maintenance is seen in horticulture aspect of plant maintenance.	The combination of new are in the introduced landscape industry at least have re-established the landscape industry, thus it landscapes maintenance activities.

Group	Current	Future
	• Landscape maintenance is known as landscaping maintenance have translated into an almost obsolete job title.	• Job titles and OF in landscape maintenance activities should be realign with the introduction of Landscape Information Modelling for non-building facilities namely sensitive areas, natural areas based on their land uses and scale of development.

The Services To Buildings And Landscape Activities is an important sector of the economy that is undergoing significant changes due to advancements in IR technology. Majority of the FGD and in-depth interview agreed that the IR will impact directly to the industries as they are very relatable to demanding services sector. IR provides better lead time with lower cost, while improve efficiencies, less manpower needed, less human error, improve product quality, simulation made easier, prototype more accurate, and improve productivity.

However, majority of them also agreed that the technology advancement may affect their job in the industries in future. The advancement of the IR affects industries by integrating IoT and automation into smart buildings, replacing human tasks with AI and machinery, enhancing management efficiency through technology, enabling data-driven decision-making, promoting sustainability, improving remote management capabilities, optimizing space utilization, and increasing productivity. As a result, there is a growing emphasis on technical competency, with industries like cleaning becoming more tech-savvy, and a shift towards tools and automation necessitating skills like critical thinking and data analytics for effective decision-making.

Based IR nine (9) pillars that are relevant to the industries, it could be clearly noted that Autonomous Robots, Big Data Analytics, Cloud Computing, System Integration and Simulation are the pillars that are very important to all N81 industries. These findings shed light on the importance of digital literacy and the impact of technology on industrial revolutions, and provide valuable insights for job seekers,

employers, and policy makers. This contributes to the ongoing discourse on the future of work and the role of technology in IR and help inform training and professional development programs aimed at promoting the growth and competitiveness of the workforce., exploring the implications of these findings for the job market and the workforce.

5.2.2 Objective 2: To establish Occupational Structure (OS) by examine job areas, job titles and relevant competency level

The occupation structure of an industry is a critical aspect that determines the efficiency and competitiveness of the industry. Understanding the various job areas, titles, and levels within an industry provides valuable insight into the skills and competencies required to perform these jobs, and the level of expertise required for different roles. OS for each group of N811, N812 and N813 has been successfully developed through FGD with industry expert representative from every industry related to N81 group. The study has identified a total of 20 total job areas and 92 job titles in the Services To Buildings And Landscape Activities sector across all three groups (as shown in Figure 5.1): N811 (4 job areas; 18 job titles), N812 (10 job areas; 52 job titles), and N813 (6 job areas; 22 job titles).

Group 811: Combined Facilities Support Activities	Group 812: Cleaning Activities	Group 813: Landscape Care And Maintenance Service Activities
•4 Job Areas •18 Job Titles	•10 Job Areas •52 Job Titles	•6 Job Areas •22 Job Titles

Figure 5.1 Number of Job Areas and Job Titles for N81 Group

The number of job areas and titles identified for each group reflects the unique nature of the Services To Buildings And Landscape Activities sector and the specific skill sets required for each job area. The job areas within this sector include C&S, mechanical, electrical, plumbing, general cleaning of buildings, public Cleaning, transportation cleaning, marine and river cleaning, health care Cleaning, kitchen cleaning, oil & gas cleaning, heritage cleaning, external high rise building cleaning, sertu services, landscape design / redesign / upgrading, garden, park and landscape operations and maintenance, landscape turf maintenance, tree care, hardscape maintenance, and sustainable landscape management. The level of the jobs titles' competency ranked from lowest level 1 (entry level) to highest level 5 (managerial level) , according to MOSQF competency level. In summary, there is a wide range of job opportunities in the Services To Buildings And Landscape Activities, with various job levels and areas of expertise to explore.

The understanding of occupational structure is important policy makers as it provides insights and helps to understand composition of the workforce and for formulating future plans (Godora, 2021). This information is also valuable for industry players and decision makers who are looking to improve their competitiveness and meet the changing demands of the market

5.2.3 Objective 3: To determine Occupational Responsibilities (OR) that outline the main work activities and tasks for each job titles

The responsibilities of a job within an industry play a crucial role in determining the efficiency and competitiveness of the industry. Understanding the tasks, duties, and responsibilities associated with different jobs provides valuable insights into the skills and competencies required for these jobs.

The OR developed for 92 job titles described in Chapter 4 will serve as the future reference for the development of the NOSS for N81 Services To Buildings And

Landscape Activities occupation under the MSIC 2008. The results of this analysis provide a comprehensive overview of the occupational responsibilities of the industry and provide insights into the skills and competencies required for different roles. This information is valuable for industry players and decision makers who are looking to improve their competitiveness and meet the changing demands of the market, as well as for job seekers who want to understand the requirements for different positions within the industry (Talent Corp, 2022).

5.2.4 Objective 4: To determine Occupational Descriptions (OD) for each job title in demand based on the proposed Occupational Structure (OS)

The OD section provides a detailed overview of the responsibilities, KSA required for a job in demand in the Services To Buildings And Landscape Activities. The aim of OD is to give individuals and organizations a clear understanding of the role and its requirements, which will aid in evaluating the suitability of potential candidates. It is also helpful for individuals seeking to enter this field, as it highlights the necessary knowledge, experience, and competencies for success. With a comprehensive understanding of the job, the occupational description will ensure that the right person is matched with the right position, leading to improved job satisfaction, performance, and success for both the individual and the organization.

Knowing what competencies are important in an industry can help with planning and improving the industry. Understanding the skills, knowledge and abilities that are in high demand within the industry provides valuable insights into the talent needs of the industry.

This above information will give us a better understanding of the talent the industry needs. This is useful for people who work in the industry and want to be more competitive, and for people looking for jobs in the industry to know what knowledge, skills and attributes that they should have. This information is valuable for industry

players and decision makers who are looking to improve their competitiveness (UNIDO, 2022) and meet the changing demands of the market, as well as for job seekers who want to understand the requirements for critical positions within the industry.

5.2.5 Objective 5: To identify the critical jobs titles and competency needed to address demand and supply in industry

There is a total of 55 overall jobs in demand under the Services To Buildings And Landscape Activities industries managed to be listed based on the FGD session result (N811 – 18 jobs in demand, N812 – 25 jobs in demand and N813 – 12 jobs in demand). Jobs in demand data showed that there is a relatively high demand for skilled workers in the industries. This finding indicates that there may be a shortage of qualified candidates to fill these roles, which could lead to increased competition among employers for top talent. Additionally, it may suggest that there are opportunities for individuals interested in pursuing a career in this field, as there are a significant number of jobs currently available. Overall, this information could be useful for both employers and job seekers to understand the current state of the job market in this industry and make informed decisions based on the demand for specific job roles. The shortage of jobs in demand in the industries is due to several factors, including the lack of experience among candidates, high salary expectations, a lack of knowledge, skills, and competency, high turnover, a lack of local resources, a mismatch of qualification and education, rapid technological advancements, poor career growth, and the post-pandemic effect (Talent Corp, 2022; Ibrahim and Nashir, 2022). To address these challenges, companies and academic institutions need to work together to provide practical experience, competitive compensation, relevant skills training, employee retention strategies, and career growth opportunities (Valiente, Zancajo, and Jacokis, 2020).

Identifying critical job titles within an industry is important as these positions play a crucial role in determining the success and competitiveness of the industry.

Understanding the skills and competencies required for critical jobs can provide valuable insights into the industry's talent needs and help to inform workforce development initiatives. There is a total of 70 overall critical jobs titles under the Services To Buildings And Landscape Activities industries managed to be listed based on the FGD session result (N811 – 17 critical jobs, N812 – 34 critical jobs and N813 – 19 critical jobs). Several common reasons for the job shortage across industries include a mismatch of skills and training requirements, poor attitudes towards work, ineffective communication of skills by job seekers in their CVs, and vague job specifications by employers. For N811, challenges arise from the rise of green buildings, workers opting for unrelated tasks, poor fundamental understanding of FM, and communication gaps. For N812, deterrents range from unappealing compensation, lack of specialized training institutions, societal stigmas against cleaning jobs, to a general undervaluation of the industry. Meanwhile for N813, the issues revolve around inadequate compensation, unclear skill distinctions, and decreased industry demand.

Emerging skills are new abilities in high demand due to technological progress, global economic shifts, and other factors. They often relate to technology, digital transformation, data analysis, design thinking, and cross-cultural teamwork. Possessing these skills fosters innovation and competitiveness, enabling individuals and organizations to adapt to workplace shifts. In the current dynamic job landscape, it is vital to stay updated with such skills. Future emerging skills identified in the industry encompass advanced technological integration, such as IoT, AI, and digitalization, combined with critical thinking, sustainability practices, and specialized expertise in areas like actuarial science and design. The need for emerging skills in the building and facilities sector is driven by the demand for higher quality services, adapting to global trends, enhancing industry image, adopting new technologies, and addressing complex challenges efficiently. To address emerging skills requirements, it is recommended to enhance access to training, particularly in technology and automation, promote continuous learning, align with best practices, and secure

government support for upskilling, all while ensuring adaptability and relevance to industry changes. This insight into evolving job market skills, aiding job seekers, employers, and policymakers in shaping future workforce training and development strategies.

5.3 Recommendations

The OF is a comprehensive report designed to inform the industry about the necessary human capital development requirements for a specific sector. The ultimate goal of the OF is to serve as a reference for the industry's future plans to develop skilled workers and certify Malaysians in sector N81, with the aim of enhancing the quality of the local sector and ultimately boosting Malaysia's global competitiveness.

The OS was created by incorporating feedback from FGD and it highlights the various job areas, job titles, and career paths based on competency levels. During the development of the OS, a number of challenges were identified for N81 industries in Malaysia. Taking these findings into consideration, recommendations have been proposed for N81 industries:

- a) Update and develop NOSS: Based on research findings, 20 NOSS are directly related to 92 developed OF jobs titles. It is recommended that 17 NOSS from the 20 NOSS that identified as jobs in demand and/or critical jobs to be reviewed and updated. Additionally, the remaining 72 job titles that currently have no NOSS are encouraged to be developed or merged, if needed. This will not only ensure a standardized set of skills, knowledge and competencies required for each occupation within the sector but will also be helpful for universities and TVET training institutions to review their existing curriculum, cater the industry needs and align with IR direction.
- b) Add qualification requirements to Job Descriptions: Given the unique nature of the N81 Services To Buildings And Landscape Activities, it is recommended that qualification requirements be added to job descriptions where appropriate.

This will help to ensure that employers have a clear understanding of the qualifications and skills required for each role, and that job seekers are aware of the qualifications and skills they need to possess to be considered for these roles.

- c) To map the develop OF might directly related to other building related MSIC Division including the F43; Specialise Construction Activities, F41 Construction of Buildings, and F42 Civil Engineering. Other indirect related MSIC Division might be to consider the A016 Support Activities of Agriculture, A012 Growing Perennial Crop, E36, Water Collection and Treatment, E37 Sewerage, E38 Waste Collection.
- d) Suggestions for improving this OF framework more extensive data collection may be necessary to provide a more complete and accurate understanding of the competencies and skills required for each group within the N81 division for future scope and issue reference

5.4 Limitation

One of the primary limitations of this research is the no specific jobs titles data from DOSM database conducting a thorough literature review and data collection on the N81 Occupational Framework. The framework covers three distinct groups, including Group N811 Combined Facilities Support Activities; Group N812 Cleaning Activities; and Group N813 Landscape Care and Maintenance Service Activities. Each group has its own set of competencies and skills, making it challenging to conduct a comprehensive analysis in a limited database.

Furthermore, obtaining up-to-date data on industry growth, employment trends, and other relevant factors can also be challenging, particularly given the understudied N81 area and constantly evolving nature of the industry. As a result, this data for this research needs to be updated a few times to provide a complete and accurate picture of the current state of each group within the N81 division.

In summary, while this research provides valuable insights into the potential benefits of the N81 Occupational Framework, its limitations include the lack of DOSM database for literature review and data collection, the complexity of the framework's three distinct groups, and the rapidly evolving nature of the industry.

5.5 Conclusion

The research findings indicate that the objectives of this study have been accomplished. The OS for N81 Services To Buildings And Landscape Activities has identified 20 job areas and 92 job titles that possess distinct occupational structures, duties, and descriptions. These job titles are significant for the industry's transformation and essential job areas. The study also identifies the emerging skills and competencies required to support the growth of the industry. These findings will serve as a foundation for the development of the NOSS document. The existing NOSS should be reviewed and the NOSS for critical job and job in demand to be develop.

The N81 Occupational Framework can also provide valuable insights for stakeholders on the current and future trends in the N81 industries. This includes information on emerging technologies, new business models, and changing customer needs. This information can help stakeholders to stay ahead of the curve and to anticipate and respond to changes in the industry.

Furthermore, the N81 Occupational Framework can help stakeholders to identify and address gaps and inefficiencies in the industry. For example, it can highlight areas where there is a shortage of skilled workers or where there are barriers to entry for new workers. This information can be used to develop targeted initiatives and policies to address these issues.

Additionally, the N81 Occupational Framework can be used to support workforce planning and development. It can provide insights on the supply and demand for various occupations within the N81 industries, which can inform decisions around hiring, training, and succession planning.

Finally, the N81 Occupational Framework can provide a common language and understanding among stakeholders, which can facilitate collaboration and innovation within the industry. In addition, the framework can provide valuable insights on industry trends and help identify gaps and inefficiencies. It can also support workforce planning and development and facilitate collaboration and innovation among stakeholders. Overall, the N81 Occupational Framework has the potential to bring numerous benefits to the industry and its stakeholders.

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APPENDIX

ANNEX 1: IN-DEPTH INTERVIEW QUESTION LIST

EXPERT INTERVIEW

Semi-structured Interview Questions Outline

THE DEVELOPMENT OF OCCUPATIONAL FRAMEWORK

UPUM Sdn. Bhd. has been tasked to develop Occupational Frameworks in divisions N81 – Service to buildings and landscape activities of economic areas according to the Malaysia Standard Industrial Classification (MSIC) 2008, by the Department of Skills Development (DSD), Ministry of Human Resources.

The research aims to establish the occupational structure for these divisions by examining job areas, job titles, and levels; determine the occupational description and responsibilities for each job; examine the jobs and competencies in demand; identify critical job titles; and competency needed to address the demand and supply of the industry in Malaysia.

This Questionnaire instrument is used to achieve the following objectives:

- a) To identify the knowledge, skills, and attributes (KSA) competency in demand of each job titles identified during FGD 1 session
- b) To review current situation and future needs of the industry.

Hence, we welcome your feedback and responses as expert panel members.

The Questionnaire instrument consists of three (3) sections. Please attempt all sections and fill in where applicable.

SECTION 1: RESPONDENT DETAIL

Please answer:

1. Group of N81: Services To Buildings And Landscape Activities industries you represent. Please TICK (/) where appropriate
 - Group 811 Combined Facilities Support Activities
 - Group 812 Cleaning Activities.
 - Group 813 Landscape Care And Maintenance Service Activities.
2. Full name:
3. Current organisation/ institution:
4. Position in the organization:
5. Education Level:
6. Overall number of years in the industry:
7. Current scope of work:

SECTION 2: COMPETENCY IN DEMAND

The competency in demand within this context refers to the job titles in demand that have been identified as important for the operations of the sector. The competency in demand describes the summary of responsibilities, job level, and competency set such as knowledge, skills, and attributes (KSA) particular to the job.

Knowledge is defined as the understanding of information acquired through education or experience that could be beneficial to perform a task. Skill is the ability to perform specific tasks or activities efficiently and competently. Attribute (Attitude) is related to the quality or characteristic that is important to the task

Kindly refer to the given developed occupational Structure (OS) and Knowledge-Skill-Attribute descriptions to understand each competency relevance. According to your expert opinion, choose the following KSA competency over each job title to perform the work.

COMPETENCY IN DEMAND	DESCRIPTION
Knowledge	
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modelling, leadership technique, production methods, and coordination of people and resources.
Administrative	Knowledge of administrative and office procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and workplace terminology.
Botany	Knowledge of plants, including their taxonomy, genetics, physiology, and ecology to ensure the healthy growth of plants
Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
Chemistry	Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models
Economics and Accounting	Knowledge of economic and accounting principles and practices, the financial markets, banking, and the analysis and reporting of financial data.

COMPETENCY IN DEMAND	DESCRIPTION
Education and Training	Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Engineering Design	Understand and practise the process of conceptualizing, planning, and developing a solution to a technical problem.
English/Malay Language	Knowledge of the structure and content of the English/Malay language including the meaning and spelling of words, rules of composition, and grammar.
Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
Personnel and Human Resources	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
Physics	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.
Production and Processing	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
Project Management	Understand and practise the process of organizing, planning, executing and controlling resources, procedures and protocols to achieve specific goals and objectives within a specified time frame.
Public Safety and Security	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
Sales and Marketing	Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.
Transportation	Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
COMPETENCY IN DEMAND	DESCRIPTION
Skills	
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

COMPETENCY IN DEMAND	DESCRIPTION
Coordination	Adjusting actions in relation to others' actions.
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
Equipment Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
Equipment Selection	Determining the kind of tools and equipment needed to do a job.
Installation	Installing equipment, machines, wiring, or programs to meet specifications.
Instructing	Teaching others how to do something.
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.
Learning Strategies	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
Management of Financial Resources	Determining how money will be spent to get the work done, and accounting for these expenditures.
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.
Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
Negotiation	Bringing others together and trying to reconcile differences.
Operation and Control	Controlling operations of equipment or systems.
Operations Analysis	Analysing needs and product requirements to create a design.
Operations Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.
Persuasion	Persuading others to change their minds or behavior.
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance
Reading Comprehension	Understanding written sentences and paragraphs in work-related documents.
Repairing	Repairing machines or systems using the needed tools.
Science	Using scientific rules and methods to solve problems.
Service Orientation	Actively looking for ways to help people.
Social Perceptiveness	Being aware of others' reactions and understanding why they react as they do.
Speaking	Talking to others to convey information effectively.
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
Systems Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
Time Management	Managing one's own time and the time of others.
Troubleshooting	Determining causes of operating errors and deciding what to do about it.
Writing	Communicating effectively in writing as appropriate for the needs of the audience

COMPETENCY IN DEMAND	DESCRIPTION
Attribute (Attitude)	
Achievement/Effort	Establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
Adaptability/Flexibility	Being open to change (positive or negative) and to considerable variety in the workplace
Analytical Thinking	Analyzing information and using logic to address work-related issues and problems.
Attention to Detail	Being careful about detail and thorough in completing work tasks.
Career management	Able to set career goals, explore and identify opportunities for growth and advancement, and continuously working to improve skills, knowledge, and abilities
Concern for Others	Being sensitive to others' needs and feelings and being understanding and helpful on the job
Cooperation	Being pleasant with others on the job and displaying a good-natured, cooperative attitude.
Dependability	Being reliable, responsible, and dependable, and fulfilling obligations.
Independence	Developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
Initiative	Willingness to take on responsibilities and challenges.
Innovation	Creativity and alternative thinking to develop new ideas for and answers to work-related problems.
Integrity	Being honest and ethical.
Leadership	Willingness to lead, take charge, and offer opinions and direction.
Persistence	Persistence in the face of obstacles
Professionalism	A competent, knowledgeable, and skilled in their work in completing a task.
Self-Control	Maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
Social Orientation	Preferring to work with others rather than alone, and being personally connected with others on the job.
Stress Tolerance	Accepting criticism and dealing calmly and effectively with high-stress situations.
Teamwork	Able and willing to collaborate and cooperate between individuals in working together towards completing a goal.

SECTION 3: INDUSTRY CURRENT SITUATIONS AND FUTURE NEEDS

1. Jobs in Demand and Critical Jobs

Job in demand by industry definition are the job that required more worker in certain area to meet future industrial revolution need, however there is a shortage of workforce supply. Jobs in demand are important to determine what job titles are demanded by the industry.

The critical jobs are jobs in demand but hard to fill and are always short of supply due to the nature of the jobs which require certain skills set. It is also considered as the strategic occupation of the industry that is critical to the success of the operation implementation.

- a) According to your opinion, rank your agreement on the jobs in demand for these jobs
 - No Shortage
 - Shortage
- b) According to your opinion, rank your agreement on the critical jobs for these jobs
 - Not Critical
 - Critical
- c) Others reason for the skills gap, suggestion and future recommendation?

2. Emerging Skills

Emerging skills refer to new or rapidly evolving abilities and competencies that are in high demand in the job market due to technological advancements, changes in the global economy, and other factors. These skills are typically related to new technologies or digital transformation, data analysis, design thinking, and cross-cultural collaboration, among others. Emerging skills are seen as key drivers of innovation and competitiveness, and individuals and organizations who have them are better equipped to adapt to the changing demands of the workplace

- a) Identify some future Emerging Skills that affect and/or required for the industry.
- b) Provide some reasons for the need of this Emerging Skills requirement
- c) Provide some recommendation or suggestion for this Emerging Skills requirement

3. Job Title Relevant to Industrial Revolution

As the technology grows rapidly, it is likely to foresee the future occupation will be more automated especially with the introduction of AI, robotics and what not.

Industrial revolution has significantly improved manufacturing industries especially on production volume, lead time, accuracy and efficiencies. However, it does affect towards reducing manpower and high maintenance.

According to your opinion, rank your agreement on the technology:

a) The Industrial Revolution would have an impact on this industry

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Agree
- ☐ Strongly Agree

b) Please why and how the Industrial Revolution and Technology advancement will impact your industry?

c) Listed below are the nine (9) IR Technology Pillars attribute that may relate to your industry/ job area. Rank your agreement issues related to N81 Services To Buildings And Landscape Activities

- ☐ Strongly Not Related
- ☐ Not Related
- ☐ Related
- ☐ Strongly Related

- Autonomous Robots - Coordinated and automated actions of robots to complete tasks intelligently, with minimal human input
- Big Data Analytics - The analysis of ever larger volumes of data. Circulation, collection, and analysis of information is a necessity because it supports productivity growth based on a real-time decision-making process
- Cloud Computing - Storing and accessing data and programs over the Internet instead of your computer's hard drive
- Internet of Things (IoT) - All machines and systems connected to the production plant (as well as other systems) must be able to collect, exchange and save these massive volumes of information, in a completely autonomous way and without the need of human intervention
- Additive Manufacturing (3D Printing) - Use in prototyping, design iteration and small scale production and often described as "rapid prototyping" - produce the desired components faster, more flexibly and more precisely than ever before
- System Integration - The process of linking together different computing systems and software applications physically or functionally to act as a coordinated whole via IoT
- Cybersecurity - With the increased connectivity and use of standard communications protocols, the need to protect critical industrial systems and manufacturing lines from cybersecurity threats is increasing
- Augmented Reality - Augmented-reality-based systems support a variety of services, such as selecting parts in a warehouse and sending repair instructions over mobile

devices - provide workers with real-time information to improve decision making and work procedures

- Simulation - Simulations will leverage real-time data to mirror the physical world in a virtual model, which can include machines, products, and humans. This allows operators to test and optimize the machine settings for the next product in line in the virtual world before the physical changeover, thereby driving down machine setup times and increasing quality

4. Common issues related to the industry

a) According to your expert opinion, rank your agreement on the key issues affecting the workforce of the industry.

- Strongly Not Related
- Not Related
- Related
- Strongly Related

- Insufficient number of skilled workers
- Insufficient number of certified workers
- Insufficient number of competence workers
- High dependence on foreign labor
- Underpayment of wages leads to high turnover
- Talent Gap among graduates
- Adaptation to technological changes
- Poor facilities and amenities for workers

b) Others issues affecting the workforce of the industry that not specify above.

c) Please add any comment, recommendation, or suggestion to some most prevailing issues affecting the workforce of the industry

5. Government Legislation, Policies & Initiatives

If any, kindly describe several Government Legislation, Policies, and initiatives related to the industry. This information will help the researcher cross-check with existing literature and enhance this project's reporting.

- a) Government Legislation
- b) Government Policies
- c) Government Initiatives

ANNEX 2: OCCUPATIONAL DESCRIPTION (OD)

TITLE : OCCUPATIONAL DESCRIPTION
SECTION : (N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
DIVISION : (81) SERVICES TO BUILDINGS AND LANDSCAPE
ACTIVITIES
GROUP : (811) COMBINED FACILITIES SUPPORT ACTIVITIES

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Civil & Structure (C&S)
JOB TITLE : Facility Management Manager
LEVEL : 5

Job Responsibilities:

O&M planning - to plan O&M policies and guidelines, verify O&M works, plan o&m operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty; Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff; Finance and business planning - to plan overall FM activity budget, prepare financial management planning (FMP), manage project P&L and manage procurement method/approach; Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures; Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations; Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal; Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service performance level, coordinate change order management, and perform contract closure; Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report; Project management - to prepare project management plan (PMP), assign project team members and perform project monitoring and control; Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity.

Knowledge:

Administration and Management; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mechanical; Personnel and Human Resources; Project Management; Public Safety and Security; Building and Construction

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Instructing; Judgment and Decision Making; Management of Financial Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Service Orientation; Social Perceptiveness; Systems Analysis; Systems Evaluation; Time Management; Writing;

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Civil & Structure (C&S)
JOB TITLE : Facility Management Executive
LEVEL : 4

Job Responsibilities:

O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage o&m technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity; Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork; Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule; Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report; Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report; Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level; Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan; Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.

Knowledge:

Building and Construction; Customer and Personal Service; Economics and Accounting; Engineering and Technology; English/Malay Language; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Administrative; Education and Training

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Judgment and Decision Making; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Persuasion; Quality Control Analysis; Service Orientation; Social Perceptiveness; Time Management; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Cooperation; Dependability; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Civil & Structure (C&S)
JOB TITLE : Facility Supervisor C&S
LEVEL : 3

Job Responsibilities:

Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for C&S works, giving instructions and technical assistance; O&M: a) Overseeing the C&S repair work to ensure the completion of work; b) Verify C&S work order and checklist carry out by C&S maintenance team; c) Monitor/tracking program schedule; d) Implement the C&S maintenance schedules; e) Identifying and resolving the C&S technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs; Vendor Management: Coordinating with external vendors or contractors for C&S maintenance and repair work.; SHE : Ensuring that all C&S activities adhere to safety regulations and protocols to minimize workplace accidents and hazards; Quality: Ensuring that C&S maintenance and repair work is performed to high-quality standards; Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation.

Knowledge:

Building and Construction; Engineering and Technology; English/Malay Language; Law and Government; Personnel and Human Resources; Public Safety and Security; Administrative

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Monitoring; Operation and Control; Operations Monitoring; Speaking; Time Management; Writing

Attributes (Attitude):

Achievement/Effort; Cooperation; Integrity; Leadership; Teamwork; Attention to Detail

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Civil & Structure (C&S)
JOB TITLE : Facility Technician C&S
LEVEL : 2

Job Responsibilities:

O&M: a) To perform C&S checklist that has been carry out; b) Maintaining records and documentation related to maintenance activities, inspections, and repairs; c) To carry out C&S repair work as assigned by supervisor; d) Identifying and resolving the minor C&S technical issues; SHE: Able to maintain implement health, safety and environment measure; Quality: Able to maintain quality measure.

Knowledge:

Building and Construction; English/Malay Language; Law and Government; Public Safety and Security

Skills:

Equipment Maintenance; Repairing; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Integrity; Teamwork; Attention to Detail; Cooperation

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Civil & Structure (C&S)
JOB TITLE : Facility Handyman C&S
LEVEL : 1

Job Responsibilities:

O&M: a) Minor repair work; b) Clear blockage for sewerage and plumbing system; c) Preparing tools and material for maintenance; d) Carry out basic repairing works for bricklayer, plaster, painting, concrete, ceiling and carpentry; SHE: Ensure implementation of health, safety and environment measure.

Knowledge:

Building and Construction; Public; Safety; Security

Skills:

Equipment Maintenance; Repairing; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Integrity; Teamwork; Attention to Detail; Cooperation

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Mechanical
JOB TITLE : Facility Management Manager Mechanical
LEVEL : 5

Job Responsibilities:

O&M planning - to plan O&M policies and guidelines, verify O&M works, plan o&m operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty; Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff; Finance and business planning - to plan overall FM activity budget, prepare financial management planning (FMP), manage project P&L and manage procurement method/approach; Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures; Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations; Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal; Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service performance level, coordinate change order management, and perform contract closure; Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report; Project management - to prepare PMP, assign project team members and perform project monitoring and control; Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity.

Knowledge:

Administration and Management; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mechanical; Personnel and Human Resources; Project Management; Public Safety and Security; Building and Construction

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Instructing; Judgment and Decision Making; Management of Financial Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Service Orientation; Social Perceptiveness; Systems Analysis; Systems Evaluation; Time Management; Writing;

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Mechanical
JOB TITLE : Facility Management Executive Mechanical
LEVEL : 4

Job Responsibilities:

O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage o&m technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity; Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork; Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule; Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report; Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report; Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level; Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan; Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.

Knowledge:

Building and Construction; Customer and Personal Service; Economics and Accounting; Engineering and Technology; English/Malay Language; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Administrative; Education and Training

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Judgment and Decision Making; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Persuasion; Quality Control Analysis; Service Orientation; Social Perceptiveness; Time Management; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Cooperation; Dependability; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Mechanical
JOB TITLE : Facility Supervisor Mechanical
LEVEL : 3

Job Responsibilities:

Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for mechanical works, giving instructions and technical assistance; O&M: a) Overseeing the mechanical repair work to ensure the completion of work; b) Verify mechanical work order and checklist carry out by C&S maintenance team; c) Monitor/tracking program schedule; d) Implement the mechanical maintenance schedules; e) Identifying and resolving the mechanical technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs; Vendor Management: Coordinating with external vendors or contractors for mechanical maintenance and repair work; SHE: Ensuring that all mechanical activities adhere to safety regulations and protocols to minimize workplace accidents and hazards; Quality: Ensuring that mechanical maintenance and repair work is performed to high-quality standards; Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation

Knowledge:

Engineering and Technology; English/Malay Language; Law and Government; Mechanical; Building and Construction; Customer and Personal Service

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Instructing; Monitoring; Operation and Control; Operations Monitoring; Repairing; Service Orientation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Teamwork; Cooperation; Dependability; Integrity; Concern for Others; Social Orientation;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Mechanical
JOB TITLE : Facility Technician Mechanical
LEVEL : 2

Job Responsibilities:

O&M: a) To perform mechanical checklist that has been carry out: b) Maintaining records and documentation related to maintenance activities, inspections, and repairs: c) To carry out mechanical repair work as assigned by supervisor: d) Identifying and resolving the minor mechanical technical issues.; SHE: Able to maintain implement health, safety and environment measure; Quality: Able to maintain quality measure

Knowledge:

English/Malay Language; Mechanical; Building and Construction; Engineering and Technology; Public Safety and Security;

Skills:

Equipment Maintenance; Repairing; Speaking; Troubleshooting; Writing;

Attributes (Attitude):

Teamwork; Cooperation; Integrity; Dependability; Social Orientation; Stress Tolerance; Concern for Others; Initiative

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Electrical
JOB TITLE : Facility Management Manager Electrical
LEVEL : 5

Job Responsibilities:

O&M planning - to plan O&M policies and guidelines, verify O&M works, plan o&m operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty; Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff; Finance and business planning - to plan overall FM activity budget, prepare financial management planning (FMP), manage project P&L and manage procurement method/approach; Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures; Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations; Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal; Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service performance level, coordinate change order management, and perform contract closure; Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report; Project management - to prepare PMP, assign project team members and perform project monitoring and control; Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity.

Knowledge:

Administration and Management; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mechanical; Personnel and Human Resources; Project Management; Public Safety and Security; Building and Construction

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Instructing; Judgment and Decision Making; Management of Financial Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Service Orientation; Social Perceptiveness; Systems Analysis; Systems Evaluation; Time Management; Writing;

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Electrical
JOB TITLE : Facility Management Executive Electrical
LEVEL : 4

Job Responsibilities:

O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage o&m technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity; Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork; Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule; Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report; Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report; Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level; Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan; Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.

Knowledge:

Building and Construction; Customer and Personal Service; Economics and Accounting; Engineering and Technology; English/Malay Language; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Administrative; Education and Training

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Judgment and Decision Making; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Persuasion; Quality Control Analysis; Service Orientation; Social Perceptiveness; Time Management; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Cooperation; Dependability; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Electrical
JOB TITLE : Facility Supervisor Electrical
LEVEL : 3

Job Responsibilities:

Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for electrical works, giving instructions and technical assistance; O&M: a) Overseeing the electrical repair work to ensure the completion of work: b) Verify electrical work order and checklist carry out by C&S maintenance team: c) Monitor/tracking program schedule: d) Implement the electrical maintenance schedules: e) Identifying and resolving the electrical technical issues: f) Maintaining records and documentation related to maintenance activities, inspections, and repairs; Vendor Management: Coordinating with external vendors or contractors for electrical maintenance and repair work; SHE: Ensuring that all electrical activities adhere to safety regulations and protocols to minimize workplace accidents and hazards; Quality: Ensuring that electrical maintenance and repair work is performed to high-quality standards; Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation

Knowledge:

Building and Construction; Design; Engineering and Technology; English/Malay Language; Law and Government; Production and Processing; Public Safety and Security

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Monitoring; Operation and Control; Repairing; Service Orientation; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Attention to Detail; Concern for Others; Cooperation; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Electrical
JOB TITLE : Facility Technician Electrical
LEVEL : 2

Job Responsibilities:

O&M: a) To perform electrical checklist that has been carry out: b) Maintaining records and documentation related to maintenance activities, inspections, and repairs: c) To carry out electrical repair work as assigned by supervisor: d) Identifying and resolving the minor electrical technical issues; SHE: Able to maintain implement health, safety and environment measure; Quality: Able to maintain quality measure

Knowledge:

English/Malay Language; Production and Processing; Public Safety and Security; Building and Construction; Engineering and Technology; Customer and Personal Service; Mechanical

Skills:

Active Listening; Equipment Maintenance; Repairing; Service Orientation; Troubleshooting; Writing; Time Management

Attributes (Attitude):

Attention to Detail; Concern for Others; Cooperation; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Plumbing
JOB TITLE : Facility Management Manager Plumbing
LEVEL : 5

Job Responsibilities:

O&M planning - to plan O&M policies and guidelines, verify O&M works, plan o&m operational budget, plan operation expenses, monitor vendor work performance and manage asset defect and warranty; Leadership and strategy planning - to develop FM strategic plan, formulate sound business case, plan coaching and motivation session, plan work delegation and empowerment and nurture teamwork among staff; Finance and business planning - to plan overall FM activity budget, prepare financial management planning (FMP), manage project P&L and manage procurement method/approach; Risk management control - to identify FM project risk, prepare risk mitigation plan, implement risk mitigation control and develop BCP procedures; Communication planning - to prepare FM communications plan, perform correspondence management, monitor project meetings and prepare project presentations; Human resource management - to prepare recruitment and employment requirements, perform TNA, establish training plan and prepare staff performance appraisal; Contract management governance - to perform contract interpretations and compliance, monitor contract compliance, manage service performance level, coordinate change order management, and perform contract closure; Quality control management - to prepare QMP, propose customer satisfaction survey improvements, perform statutory compliance planning, perform vendor and service provider assessment, and verify sign off project report; Project management - to prepare PMP, assign project team members and perform project monitoring and control; Technology planning - to identify suitable FM technology, plan new technology adoption, plan facilities space analysis and plan space management consultation activity.

Knowledge:

Administration and Management; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mechanical; Personnel and Human Resources; Project Management; Public Safety and Security; Building and Construction

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Instructing; Judgment and Decision Making; Management of Financial Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Service Orientation; Social Perceptiveness; Systems Analysis; Systems Evaluation; Time Management; Writing;

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Plumbing
JOB TITLE : Facility Management Executive Plumbing
LEVEL : 4

Job Responsibilities:

O&M coordination - to prepare O&M work plan, coordinate safety, health and security procedures, manage facilities tools, equipment, and materials inventory, manage o&m technical data, coordinate operation improvement solutions, monitor asset warranty and coordinate BCP activity; Leadership and strategy implementation - to implement FM strategic plan, implement FM tactical plan and monitor staff teamwork; Finance administration - to monitor financial management plan, compile budget requirements and prepare progress claim schedule; Communication plan implementation - to perform liaison with stakeholders, conduct work meeting and prepare operational summary report; Human resource administration - to implement human resource plan, manage staff training programmes and prepare staff performance report; Contract administration - to prepare contract costing estimations, administer change orders activity, administer procurement procedures and administer contract compliance and performance level; Quality control coordination - to prepare quality management documentation, coordinate quality audit and compliance activity, coordinate customer satisfaction survey activity and implement quality improvement plan; Project management plan implementation - to manage project service delivery, manage project implementation plan and manage project team members.

Knowledge:

Building and Construction; Customer and Personal Service; Economics and Accounting; Engineering and Technology; English/Malay Language; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Administrative; Education and Training

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Judgment and Decision Making; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Persuasion; Quality Control Analysis; Service Orientation; Social Perceptiveness; Time Management; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Cooperation; Dependability; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Plumbing
JOB TITLE : Facility Supervisor Plumbing
LEVEL : 3

Job Responsibilities:

Supervision Leadership: a) To coordinate supervision tasks; b) Providing on the job training and guidance to O&M staff to enhance their skills and knowledge; c) Assign and supervise the maintenance team for plumbing works, giving instructions and technical assistance; O&M: a) Overseeing the plumbing repair work to ensure the completion of work; b) Verify C&S work order and checklist carry out by plumbing maintenance team; c) Monitor/tracking program schedule; d) Implement the plumbing maintenance schedules; e) Identifying and resolving the plumbing technical issues; f) Maintaining records and documentation related to maintenance activities, inspections, and repairs; Vendor Management: Coordinating with external vendors or contractors for plumbing maintenance and repair work; SHE: Ensuring that all plumbing activities adhere to safety regulations and protocols to minimize workplace accidents and hazards; Quality: Ensuring that plumbing maintenance and repair work is performed to high-quality standards; Budgeting: Able to supervise team, implement health, safety and environment measure, work within approved budget, and maintain cost operation

Knowledge:

Building and Construction; Engineering and Technology; English/Malay Language; Law and Government; Public Safety and Security; Design

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Instructing; Monitoring; Operation and Control; Operations Monitoring; Repairing; Service Orientation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Attention to Detail; Concern for Others; Cooperation; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Plumbing
JOB TITLE : Facility Technician Plumbing
LEVEL : 2

Job Responsibilities:

O&M: a) To perform plumber checklist that has been carry out: b) Maintaining records and documentation related to maintenance activities, inspections, and repairs: c) To carry out electrical repair work as assigned by supervisor: d) Identifying and resolving the minor plumber technical issues; SHE: Able to maintain implement health, safety and environment measure; Quality: Able to maintain quality measure

Knowledge:

Building and Construction; English/Malay Language; Law and Government; Public Safety and Security;

Skills:

Equipment Maintenance; Repairing; Speaking; Troubleshooting; Writing

Attributes (Attitude):

Adaptability/Flexibility; Attention to Detail; Cooperation; Dependability; Integrity; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N811: Combined facilities support activities.
AREA : Plumbing
JOB TITLE : Plumbing Handyman
LEVEL : 1

Job Responsibilities:

O&M: a) Minor repair work; b) Clear blockage for sewerage and plumbing system; c) Preparing tools and material for maintenance; d) Carry out basic repairing works for plumbing;
SHE: Ensure implementation of health, safety, and environment measur

Knowledge:

Building and Construction; English/Malay Language; Public Safety and Security

Skills:

Equipment Maintenance; Repairing; Speaking; Troubleshooting; Writing

Attributes (Attitude):

Cooperation; Dependability; Integrity; Stress Tolerance; Teamwork;

TITLE : OCCUPATIONAL DESCRIPTION
SECTION : (N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
DIVISION : (81) SERVICES TO BUILDINGS AND LANDSCAPE
ACTIVITIES
GROUP : (812) CLEANING ACTIVITIES

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : General Cleaning Of Buildings
JOB TITLE : Building Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) oversee effective cleaning operation towards quality service delivery to the client; b) enforce safety measures during cleaning operations; c) plan cleaning operations budget; d) plan work procedures improvement and quality service delivery; e) analyse relevant data for cleaning process improvement; f) conduct quality audit with client; g) implement strategic plans and value added services to improve client relationship; Manage inventory, equipment and maintenance schedule: a) select and suggest appropriate equipment and/or technologies and supplies for project sites; b) ensure sufficient materials, equipment, machine, chemical; c) recommended equipment and machineries with the new technologies suitable for business operations; d) monitor and control allocation of resources to project sites; Manage cleaning teams: a) manage work schedules and deployment of manpower; b) manage team improvement and capability development; c) promote good teamwork in alignment with organisational core values; Manage contracts: a) oversee the preparation of tender and quotations for cleaning operations; b) manage internal and external parties involve in contract development; c) negotiate terms and pricing to ensure accurate execution; d) manage contract conflicts and mitigate corrective action; e) provide solutions for contract conflicts; Manage incidents: a) analyse report on major incidents and emergencies for submission to the management; b) propose preventive action or measure to avoid future occurrences of major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : General Cleaning Of Buildings
JOB TITLE : Building Cleaning Executive
LEVEL : 4

Job Responsibilities:

Manage cleaning services; a) ensure quality service delivery by coordinating with supervisor and client; b) monitor operation expenses according to contract budget; c) promote safety measures to be adhered by cleaning team during cleaning operations; d) assist in improving work procedures and quality service delivery by reviewing operation plan; e) collect, compile and analyse relevant data to recommend cleaning process improvement; f) record and report daily cleaning activities to management and client; g) conduct quality assurance with client; Manage materials, equipment, machine, chemical and maintenance schedule; a) allocate materials, equipment, machine and chemical to project sites; b) maintain supplies of materials, equipment, machine and chemical; c) identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) implement maintenance schedules for equipment and machine; Manage cleaning teams: a) execute work schedules and deployment of manpower; b) execute effective work processes; c) execute team improvement and capability development; Manage contracts: a) attend site visit for potential project; b) assist to prepare tender/quotation; c) ensure service level agreement is fulfilled as per contract; d) ensure operation expenses are within budget guidelines; e) raise requests for purchases as required within agreed limits; f) follow up on contractual payments according to credit term; g) negotiate in resolving contract conflicts; h) report request for changes in contract terms to the management; Manage incidents: a) guide supervisor and team leader to respond major incidents and emergencies; b) validate report on major incidents and emergencies for submission to the management.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : General Cleaning Of Buildings
JOB TITLE : Building Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervise cleaning services: a) implement operation plans to improve work processes; b) deploy and assign cleaning tasks to the cleaning team; c) ensure cleaning operations meet required quality standards; d) liaise with clients at project sites; e) ensure safety measures are adhered by cleaning team during cleaning operations; f) conduct joint inspection with client; g) record and report daily cleaning activities to management and client; Supervise materials, equipment, machine and chemical and maintenance schedule: a) requisition of materials, equipment, machine and chemical in a timely manner; b) monitor stock control of materials, equipment, machine and chemical; c) preventive maintenance schedule for cleaning machineries; Supervise cleaning teams: a) plan work schedules and deployment of manpower; b) provide guidance and on the job training to cleaners; c) review team performance on regular basis; d) recommend process improvements to the cleaning team; Supervise incidents: a) respond to major incidents and emergencies; b) report and update on major incidents and emergencies to the management.

Knowledges:

Administrative; Chemistry; Customer and Personal Service; Education and Training; English/Malay Language; Mathematics; Personnel and Human Resources; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : General Cleaning Of Buildings
JOB TITLE : Building Cleaning Technician
LEVEL : 3

Job Responsibilities:

Perform cleaning services: a) carry out specialise cleaning according to buildings requirement; b) apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) adhere to safety measures; d) record and report jobs done; Support cleaning teams : a) handle technical aspect to cleaning operation; b) monitor technical equipment performance to meet schedules and/or timeline; c) manage high end equipment and machineries; d) schedule planned preventive maintenance (ppm) for cleaning equipment and machine; e) assist supervisor request parts replacement, if required; Integrate sustainable technology: a) identify issues on site and recommend appropriate techniques towards sustainability goal; b) execute technical processes involving sustainable cleaning and implement new technology application; c) monitoring effectiveness of the sustainability process improvement towards lesser environmental impact; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Engineering and Technology; English/Malay Language; Mathematics; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : General Cleaning Of Buildings
JOB TITLE : Building Cleaning Team Leader
LEVEL : 2

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures; c) record and report jobs done; Monitor cleaning teams: a) conduct induction and basic training for new cleaners: b) conduct task briefing to cleaning teams; c) assign cleaning duties to cleaning teams: d) monitor their performance to meet schedules and/or timeline; Handle materials, equipment, machine and chemical: a) prepare necessary cleaning tools, equipment, machine and chemicals: b) maintain materials, equipment, machine and chemical in good working condition; c) ensure adequate materials, equipment, machine and chemical, as required; d) ensure supplies of consumable are adequate and replenished; e) assist supervisor preparing stock inventory requisition; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Customer and Personal Service; Education and Training; English/Malay Language; Public Safety and Security; Cleaning Science

Skills:

Active Listening; Coordination; Equipment Maintenance; Instructing; Monitoring; Reading Comprehension; Service Orientation; Speaking; Time Management

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Integrity; Leadership; Professionalism; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : General Cleaning Of Buildings
JOB TITLE : Building Cleaning Operator
LEVEL : 1

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures record and report jobs done; Handle tools, equipment and chemical; a) prepare necessary cleaning tools, equipment and chemicals; b) maintain tools, equipment and chemical adequate and in good working condition; c) replenish and replace tools, equipment and chemical, as required; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior

Knowledges:

Customer and Personal Service; Education and Training; English/Malay Language; Personnel and Human Resources; Production and Processing; Cleaning Science

Skills:

Active Listening; Equipment Maintenance; Service Orientation

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Public Cleaning
JOB TITLE : Public Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) oversee effective cleaning operation towards quality service delivery to the client; b) enforce safety measures during cleaning operations; c) plan cleaning operations budget; d) plan work procedures improvement and quality service delivery; e) analyse relevant data for cleaning process improvement; f) conduct quality audit with client; g) implement strategic plans and value added services to improve client relationship; Manage inventory, equipment and maintenance schedule: a) select and suggest appropriate equipment and/or technologies and supplies for project sites; b) ensure sufficient materials, equipment, machine, chemical; c) recommended equipment and machineries with the new technologies suitable for business operations; d) monitor and control allocation of resources to project sites; Manage cleaning teams: a) manage work schedules and deployment of manpower; b) manage team improvement and capability development; c) promote good teamwork in alignment with organisational core values; Manage contracts: a) oversee the preparation of tender and quotations for cleaning operations; b) manage internal and external parties involve in contract development; c) negotiate terms and pricing to ensure accurate execution; d) manage contract conflicts and mitigate corrective action; e) provide solutions for contract conflicts; Manage incidents: a) analyse report on major incidents and emergencies for submission to the management; b) propose preventive action or measure to avoid future occurrences of major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Mechanical; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Public Cleaning
JOB TITLE : Public Cleaning Executive
LEVEL : 4

Job Responsibilities:

Manage cleaning services; a) ensure quality service delivery by coordinating with supervisor and client; b) monitor operation expenses according to contract budget; c) promote safety measures to be adhered by cleaning team during cleaning operations; d) assist in improving work procedures and quality service delivery by reviewing operation plan; e) collect, compile and analyse relevant data to recommend cleaning process improvement; f) record and report daily cleaning activities to management and client; g) conduct quality assurance with client; Manage materials, equipment, machine, chemical and maintenance schedule; a) allocate materials, equipment, machine and chemical to project sites; b) maintain supplies of materials, equipment, machine and chemical; c) identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) implement maintenance schedules for equipment and machine; Manage cleaning teams: a) execute work schedules and deployment of manpower; b) execute effective work processes; c) execute team improvement and capability development; Manage contracts: a) attend site visit for potential project; b) assist to prepare tender/quotation; c) ensure service level agreement is fulfilled as per contract; d) ensure operation expenses are within budget guidelines; e) raise requests for purchases as required within agreed limits; f) follow up on contractual payments according to credit term; g) negotiate in resolving contract conflicts; h) report request for changes in contract terms to the management; Manage incidents: a) guide supervisor and team leader to respond major incidents and emergencies; b) validate report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Public Cleaning
JOB TITLE : Public Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervise cleaning services: a) implement operation plans to improve work processes; b) deploy and assign cleaning tasks to the cleaning team; c) ensure cleaning operations meet required quality standards; d) liaise with clients at project sites; e) ensure safety measures are adhered by cleaning team during cleaning operations; f) conduct joint inspection with client; g) record and report daily cleaning activities to management and client; Supervise materials, equipment, machine and chemical and maintenance schedule: a) requisition of materials, equipment, machine and chemical in a timely manner; b) monitor stock control of materials, equipment, machine and chemical; c) preventive maintenance schedule for cleaning machineries; Supervise cleaning teams: a) plan work schedules and deployment of manpower; b) provide guidance and on the job training to cleaners; c) review team performance on regular basis; d) recommend process improvements to the cleaning team; Supervise incidents: a) respond to major incidents and emergencies; b) report and update on major incidents and emergencies to the management.

Knowledges:

Administrative; Chemistry; Customer and Personal Service; Education and Training; English/Malay Language; Mathematics; Personnel and Human Resources; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Public Cleaning
JOB TITLE : Public Cleaning Technician
LEVEL : 3

Job Responsibilities:

Perform cleaning services: a) carry out specialise cleaning according to buildings requirement; b) apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) adhere to safety measures; d) record and report jobs done; Support cleaning teams : a) handle technical aspect to cleaning operation; b) monitor technical equipment performance to meet schedules and/or timeline; c) manage high end equipment and machineries; d) schedule planned preventive maintenance (ppm) for cleaning equipment and machine; e) assist supervisor request parts replacement, if required; Integrate sustainable technology: a) identify issues on site and recommend appropriate techniques towards sustainability goal; b) execute technical processes involving sustainable cleaning and implement new technology application; c) monitoring effectiveness of the sustainability process improvement towards lesser environmental impact; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Engineering and Technology; English/Malay Language; Mathematics; Mechanical; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Judgment and Decision Making; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Public Cleaning
JOB TITLE : Public Cleaning Team Leader
LEVEL : 2

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures; c) record and report jobs done; Monitor cleaning teams: a) conduct induction and basic training for new cleaners: b) conduct task briefing to cleaning teams; c) assign cleaning duties to cleaning teams: d) monitor their performance to meet schedules and/or timeline; Handle materials, equipment, machine and chemical: a) prepare necessary cleaning tools, equipment, machine and chemicals: b) maintain materials, equipment, machine and chemical in good working condition; c) ensure adequate materials, equipment, machine and chemical, as required; d) ensure supplies of consumable are adequate and replenished; e) assist supervisor preparing stock inventory requisition; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Customer and Personal Service; English/Malay Language; Cleaning Science

Skills:

Active Listening; Coordination; Equipment Maintenance; Instructing; Monitoring; Reading Comprehension; Service Orientation; Speaking

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Integrity; Leadership; Professionalism; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Public Cleaning
JOB TITLE : Public Cleaning Operator
LEVEL : 1

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures record and report jobs done; Handle tools, equipment and chemical; a) prepare necessary cleaning tools, equipment and chemicals; b) maintain tools, equipment and chemical adequate and in good working condition; c) replenish and replace tools, equipment and chemical, as required; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior

Knowledges:

Customer and Personal Service; Education and Training; English/Malay Language; Personnel and Human Resources; Production and Processing; Cleaning Science

Skills:

Active Listening; Service Orientation

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Transportation Cleaning
JOB TITLE : Transportation Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) oversee effective cleaning operation towards quality service delivery to the client; b) enforce safety measures during cleaning operations; c) plan cleaning operations budget; d) plan work procedures improvement and quality service delivery; e) analyse relevant data for cleaning process improvement; f) conduct quality audit with client; g) implement strategic plans and value added services to improve client relationship; Manage inventory, equipment and maintenance schedule: a) select and suggest appropriate equipment and/or technologies and supplies for project sites; b) ensure sufficient materials, equipment, machine, chemical; c) recommended equipment and machineries with the new technologies suitable for business operations; d) monitor and control allocation of resources to project sites; Manage cleaning teams: a) manage work schedules and deployment of manpower; b) manage team improvement and capability development; c) promote good teamwork in alignment with organisational core values; Manage contracts: a) oversee the preparation of tender and quotations for cleaning operations; b) manage internal and external parties involve in contract development; c) negotiate terms and pricing to ensure accurate execution; d) manage contract conflicts and mitigate corrective action; e) provide solutions for contract conflicts; Manage incidents: a) analyse report on major incidents and emergencies for submission to the management; b) propose preventive action or measure to avoid future occurrences of major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Botany; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Transportation Cleaning
JOB TITLE : Transportation Cleaning Executive
LEVEL : 4

Job Responsibilities:

Manage cleaning services; a) ensure quality service delivery by coordinating with supervisor and client; b) monitor operation expenses according to contract budget; c) promote safety measures to be adhered by cleaning team during cleaning operations; d) assist in improving work procedures and quality service delivery by reviewing operation plan; e) collect, compile and analyse relevant data to recommend cleaning process improvement; f) record and report daily cleaning activities to management and client; g) conduct quality assurance with client; Manage materials, equipment, machine, chemical and maintenance schedule; a) allocate materials, equipment, machine and chemical to project sites; b) maintain supplies of materials, equipment, machine and chemical; c) identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) implement maintenance schedules for equipment and machine; Manage cleaning teams: a) execute work schedules and deployment of manpower; b) execute effective work processes; c) execute team improvement and capability development; Manage contracts: a) attend site visit for potential project; b) assist to prepare tender/quotation; c) ensure service level agreement is fulfilled as per contract; d) ensure operation expenses are within budget guidelines; e) raise requests for purchases as required within agreed limits; f) follow up on contractual payments according to credit term; g) negotiate in resolving contract conflicts; h) report request for changes in contract terms to the management; Manage incidents: a) guide supervisor and team leader to respond major incidents and emergencies; b) validate report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Botany; Chemistry; Computers and Electronics; Customer and Personal Service; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Transportation Cleaning
JOB TITLE : Transport Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervise cleaning services: a) implement operation plans to improve work processes; b) deploy and assign cleaning tasks to the cleaning team; c) ensure cleaning operations meet required quality standards; d) liaise with clients at project sites; e) ensure safety measures are adhered by cleaning team during cleaning operations; f) conduct joint inspection with client; g) record and report daily cleaning activities to management and client; Supervise materials, equipment, machine and chemical and maintenance schedule: a) requisition of materials, equipment, machine and chemical in a timely manner; b) monitor stock control of materials, equipment, machine and chemical; c) preventive maintenance schedule for cleaning machineries; Supervise cleaning teams: a) plan work schedules and deployment of manpower; b) provide guidance and on the job training to cleaners; c) review team performance on regular basis; d) recommend process improvements to the cleaning team; Supervise incidents: a) respond to major incidents and emergencies; b) report and update on major incidents and emergencies to the management.

Knowledges:

Administrative; Botany; Chemistry; Customer and Personal Service; English/Malay Language; Mathematics; Personnel and Human Resources; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Instructing; Judgment and Decision Making; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Transportation Cleaning
JOB TITLE : Transport Cleaning Technician
LEVEL : 3

Job Responsibilities:

Perform cleaning services: a) carry out specialise cleaning according to buildings requirement; b) apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) adhere to safety measures; d) record and report jobs done; Support cleaning teams : a) handle technical aspect to cleaning operation; b) monitor technical equipment performance to meet schedules and/or timeline; c) manage high end equipment and machineries; d) schedule planned preventive maintenance (ppm) for cleaning equipment and machine; e) assist supervisor request parts replacement, if required; Integrate sustainable technology: a) identify issues on site and recommend appropriate techniques towards sustainability goal; b) execute technical processes involving sustainable cleaning and implement new technology application; c) monitoring effectiveness of the sustainability process improvement towards lesser environmental impact; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Administrative; Botany; Chemistry; Computers and Electronics; English/Malay Language; Mathematics; Mechanical; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Transportation Cleaning
JOB TITLE : Transport Cleaning Team Leader
LEVEL : 2

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures; c) record and report jobs done; Monitor cleaning teams: a) conduct induction and basic training for new cleaners: b) conduct task briefing to cleaning teams; c) assign cleaning duties to cleaning teams: d) monitor their performance to meet schedules and/or timeline; Handle materials, equipment, machine and chemical: a) prepare necessary cleaning tools, equipment, machine and chemicals: b) maintain materials, equipment, machine and chemical in good working condition; c) ensure adequate materials, equipment, machine and chemical, as required; d) ensure supplies of consumable are adequate and replenished; e) assist supervisor preparing stock inventory requisition; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Customer and Personal Service; English/Malay Language; Cleaning Science

Skills:

Active Listening; Coordination; Instructing; Monitoring; Reading Comprehension; Service Orientation; Speaking; Time Management

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Integrity; Professionalism; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Transportation Cleaning
JOB TITLE : Transport Cleaning Operator
LEVEL : 1

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures record and report jobs done; Handle tools, equipment and chemical; a) prepare necessary cleaning tools, equipment and chemicals; b) maintain tools, equipment and chemical adequate and in good working condition; c) replenish and replace tools, equipment and chemical, as required; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior

Knowledges:

Education and Training; Personnel and Human Resources; Production and Processing; Cleaning Science

Skills:

Active Listening; Service Orientation

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Dependability; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Marine And River Cleaning
JOB TITLE : Marine And River Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) oversee effective cleaning operation towards quality service delivery to the client; b) enforce safety measures during cleaning operations; c) plan cleaning operations budget; d) plan work procedures improvement and quality service delivery; e) analyse relevant data for cleaning process improvement; f) conduct quality audit with client; g) implement strategic plans and value added services to improve client relationship; Manage inventory, equipment and maintenance schedule: a) select and suggest appropriate equipment and/or technologies and supplies for project sites; b) ensure sufficient materials, equipment, machine, chemical; c) recommended equipment and machineries with the new technologies suitable for business operations; d) monitor and control allocation of resources to project sites; Manage cleaning teams: a) manage work schedules and deployment of manpower; b) manage team improvement and capability development; c) promote good teamwork in alignment with organisational core values; Manage contracts: a) oversee the preparation of tender and quotations for cleaning operations; b) manage internal and external parties involve in contract development; c) negotiate terms and pricing to ensure accurate execution; d) manage contract conflicts and mitigate corrective action; e) provide solutions for contract conflicts; Manage incidents: a) analyse report on major incidents and emergencies for submission to the management; b) propose preventive action or measure to avoid future occurrences of major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Botany; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Marine And River Cleaning
JOB TITLE : Marine And River Cleaning Executive
LEVEL : 4

Job Responsibilities:

Manage cleaning services; a) ensure quality service delivery by coordinating with supervisor and client; b) monitor operation expenses according to contract budget; c) promote safety measures to be adhered by cleaning team during cleaning operations; d) assist in improving work procedures and quality service delivery by reviewing operation plan; e) collect, compile and analyse relevant data to recommend cleaning process improvement; f) record and report daily cleaning activities to management and client; g) conduct quality assurance with client; Manage materials, equipment, machine, chemical and maintenance schedule; a) allocate materials, equipment, machine and chemical to project sites; b) maintain supplies of materials, equipment, machine and chemical; c) identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) implement maintenance schedules for equipment and machine; Manage cleaning teams: a) execute work schedules and deployment of manpower; b) execute effective work processes; c) execute team improvement and capability development; Manage contracts: a) attend site visit for potential project; b) assist to prepare tender/quotation; c) ensure service level agreement is fulfilled as per contract; d) ensure operation expenses are within budget guidelines; e) raise requests for purchases as required within agreed limits; f) follow up on contractual payments according to credit term; g) negotiate in resolving contract conflicts; h) report request for changes in contract terms to the management; Manage incidents: a) guide supervisor and team leader to respond major incidents and emergencies; b) validate report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Botany; Chemistry; Computers and Electronics; Customer and Personal Service; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Marine And River Cleaning
JOB TITLE : Marine And River Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervise cleaning services: a) implement operation plans to improve work processes; b) deploy and assign cleaning tasks to the cleaning team; c) ensure cleaning operations meet required quality standards; d) liaise with clients at project sites; e) ensure safety measures are adhered by cleaning team during cleaning operations; f) conduct joint inspection with client; g) record and report daily cleaning activities to management and client; Supervise materials, equipment, machine and chemical and maintenance schedule: a) requisition of materials, equipment, machine and chemical in a timely manner; b) monitor stock control of materials, equipment, machine and chemical; c) preventive maintenance schedule for cleaning machineries; Supervise cleaning teams: a) plan work schedules and deployment of manpower; b) provide guidance and on the job training to cleaners; c) review team performance on regular basis; d) recommend process improvements to the cleaning team; Supervise incidents: a) respond to major incidents and emergencies; b) report and update on major incidents and emergencies to the management.

Knowledges:

Administrative; Botany; Chemistry; Customer and Personal Service; English/Malay Language; Mathematics; Personnel and Human Resources; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Instructing; Judgment and Decision Making; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Marine And River Cleaning
JOB TITLE : Marine And River Cleaning Technician
LEVEL : 3

Job Responsibilities:

Perform cleaning services: a) carry out specialise cleaning according to buildings requirement; b) apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) adhere to safety measures; d) record and report jobs done; Support cleaning teams : a) handle technical aspect to cleaning operation; b) monitor technical equipment performance to meet schedules and/or timeline; c) manage high end equipment and machineries; d) schedule planned preventive maintenance (ppm) for cleaning equipment and machine; e) assist supervisor request parts replacement, if required; Integrate sustainable technology: a) identify issues on site and recommend appropriate techniques towards sustainability goal; b) execute technical processes involving sustainable cleaning and implement new technology application; c) monitoring effectiveness of the sustainability process improvement towards lesser environmental impact; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Administrative; Botany; Chemistry; Computers and Electronics; English/Malay Language; Mathematics; Mechanical; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Marine And River Cleaning
JOB TITLE : Marine And River Cleaning Team Leader
LEVEL : 2

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures; c) record and report jobs done; Monitor cleaning teams: a) conduct induction and basic training for new cleaners: b) conduct task briefing to cleaning teams; c) assign cleaning duties to cleaning teams: d) monitor their performance to meet schedules and/or timeline; Handle materials, equipment, machine and chemical: a) prepare necessary cleaning tools, equipment, machine and chemicals: b) maintain materials, equipment, machine and chemical in good working condition; c) ensure adequate materials, equipment, machine and chemical, as required; d) ensure supplies of consumable are adequate and replenished; e) assist supervisor preparing stock inventory requisition; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Customer and Personal Service; English/Malay Language; Cleaning Science

Skills:

Active Listening; Coordination; Instructing; Monitoring; Reading Comprehension; Service Orientation; Speaking; Time Management

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Integrity; Professionalism; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Marine And River Cleaning
JOB TITLE : Marine And River Cleaning Operator
LEVEL : 1

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures record and report jobs done; Handle tools, equipment and chemical; a) prepare necessary cleaning tools, equipment and chemicals; b) maintain tools, equipment and chemical adequate and in good working condition; c) replenish and replace tools, equipment and chemical, as required; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior

Knowledges:

Education and Training; Personnel and Human Resources; Production and Processing; Cleaning Science

Skills:

Active Listening; Service Orientation

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Dependability; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Health Care Cleaning
JOB TITLE : Building Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) oversee effective cleaning operation towards quality service delivery to the client; b) enforce safety measures during cleaning operations; c) plan cleaning operations budget; d) plan work procedures improvement and quality service delivery; e) analyse relevant data for cleaning process improvement; f) conduct quality audit with client; g) implement strategic plans and value added services to improve client relationship; Manage inventory, equipment and maintenance schedule: a) select and suggest appropriate equipment and/or technologies and supplies for project sites; b) ensure sufficient materials, equipment, machine, chemical; c) recommended equipment and machineries with the new technologies suitable for business operations; d) monitor and control allocation of resources to project sites; Manage cleaning teams: a) manage work schedules and deployment of manpower; b) manage team improvement and capability development; c) promote good teamwork in alignment with organisational core values; Manage contracts: a) oversee the preparation of tender and quotations for cleaning operations; b) manage internal and external parties involve in contract development; c) negotiate terms and pricing to ensure accurate execution; d) manage contract conflicts and mitigate corrective action; e) provide solutions for contract conflicts; Manage incidents: a) analyse report on major incidents and emergencies for submission to the management; b) propose preventive action or measure to avoid future occurrences of major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Science; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Health Care Cleaning
JOB TITLE : Building Cleaning Executive
LEVEL : 4

Job Responsibilities:

Manage cleaning services; a) ensure quality service delivery by coordinating with supervisor and client; b) monitor operation expenses according to contract budget; c) promote safety measures to be adhered by cleaning team during cleaning operations; d) assist in improving work procedures and quality service delivery by reviewing operation plan; e) collect, compile and analyse relevant data to recommend cleaning process improvement; f) record and report daily cleaning activities to management and client; g) conduct quality assurance with client; Manage materials, equipment, machine, chemical and maintenance schedule; a) allocate materials, equipment, machine and chemical to project sites; b) maintain supplies of materials, equipment, machine and chemical; c) identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) implement maintenance schedules for equipment and machine; Manage cleaning teams: a) execute work schedules and deployment of manpower; b) execute effective work processes; c) execute team improvement and capability development; Manage contracts: a) attend site visit for potential project; b) assist to prepare tender/quotation; c) ensure service level agreement is fulfilled as per contract; d) ensure operation expenses are within budget guidelines; e) raise requests for purchases as required within agreed limits; f) follow up on contractual payments according to credit term; g) negotiate in resolving contract conflicts; h) report request for changes in contract terms to the management; Manage incidents: a) guide supervisor and team leader to respond major incidents and emergencies; b) validate report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Health Care Cleaning
JOB TITLE : Hospital Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervise cleaning services: a) implement operation plans to improve work processes; b) deploy and assign cleaning tasks to the cleaning team; c) ensure cleaning operations meet required quality standards; d) liaise with clients at project sites; e) ensure safety measures are adhered by cleaning team during cleaning operations; f) conduct joint inspection with client; g) record and report daily cleaning activities to management and client; Supervise materials, equipment, machine and chemical and maintenance schedule: a) requisition of materials, equipment, machine and chemical in a timely manner; b) monitor stock control of materials, equipment, machine and chemical; c) preventive maintenance schedule for cleaning machineries; Supervise cleaning teams: a) plan work schedules and deployment of manpower; b) provide guidance and on the job training to cleaners; c) review team performance on regular basis; d) recommend process improvements to the cleaning team; Supervise incidents: a) respond to major incidents and emergencies; b) report and update on major incidents and emergencies to the management.

Knowledges:

Administrative; Chemistry; Customer and Personal Service; Education and Training; English/Malay Language; Mathematics; Personnel and Human Resources; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Health Care Cleaning
JOB TITLE : Hospital Cleaning Technician
LEVEL : 3

Job Responsibilities:

Perform cleaning services: a) carry out specialise cleaning according to buildings requirement; b) apply appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) adhere to safety measures; d) record and report jobs done; Support cleaning teams : a) handle technical aspect to cleaning operation; b) monitor technical equipment performance to meet schedules and/or timeline; c) manage high end equipment and machineries; d) schedule planned preventive maintenance (ppm) for cleaning equipment and machine; e) assist supervisor request parts replacement, if required; Integrate sustainable technology: a) identify issues on site and recommend appropriate techniques towards sustainability goal; b) execute technical processes involving sustainable cleaning and implement new technology application; c) monitoring effectiveness of the sustainability process improvement towards lesser environmental impact; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Engineering and Technology; English/Malay Language; Mathematics; Mechanical; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Health Care Cleaning
JOB TITLE : Hospital Cleaning Team Leader
LEVEL : 2

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures; c) record and report jobs done; Monitor cleaning teams: a) conduct induction and basic training for new cleaners: b) conduct task briefing to cleaning teams; c) assign cleaning duties to cleaning teams: d) monitor their performance to meet schedules and/or timeline; Handle materials, equipment, machine and chemical: a) prepare necessary cleaning tools, equipment, machine and chemicals: b) maintain materials, equipment, machine and chemical in good working condition; c) ensure adequate materials, equipment, machine and chemical, as required; d) ensure supplies of consumable are adequate and replenished; e) assist supervisor preparing stock inventory requisition; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior.

Knowledges:

Customer and Personal Service; English/Malay Language; Cleaning Science

Skills:

Active Listening; Coordination; Instructing; Monitoring; Reading Comprehension; Service Orientation; Speaking

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Integrity; Leadership; Professionalism; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Health Care Cleaning
JOB TITLE : Hospital Cleaning Operator
LEVEL : 1

Job Responsibilities:

Perform cleaning services: a) cleaning according to buildings requirement; b) adhere to safety measures record and report jobs done; Handle tools, equipment and chemical; a) prepare necessary cleaning tools, equipment and chemicals; b) maintain tools, equipment and chemical adequate and in good working condition; c) replenish and replace tools, equipment and chemical, as required; Handle incidents: a) respond immediately to incidents and emergencies; b) report abnormalities to immediate superior

Knowledges:

English/Malay Language; Public Safety and Security

Skills:

Active Listening; Service Orientation

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Kitchen Cleaning
JOB TITLE : Kitchen Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitoring and controlling allocation of resources of project sites. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values. Managing contracts: a) Overseeing the preparation of tenders and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective actions; e) Providing solutions for contract conflicts. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive actions or measures to avoid future major incidents and emergencies

Knowledges:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Mechanical; Personnel and Human Resources; Physics; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Kitchen Cleaning
JOB TITLE : Kitchen Cleaning Executive
LEVEL : 4

Job Responsibilities:

Managing cleaning services; a) Ensuring quality service delivery by coordinating with supervisors and clients; b) Monitoring operation expenses according to the contract budget; c) Promoting safety measures to be adhered by the cleaning team during cleaning operations; d) Assisting in improvement of work procedures and quality service delivery by reviewing operation plan; e) Collecting, compiling and analysing relevant data to recommend cleaning process improvement; f) Recording and reporting daily cleaning activities to the management team and clients; g) Conducting quality assurance with clients. Managing materials, equipment, machine, chemical and maintenance schedule; a) Allocating materials, equipment, machine and chemical to project sites; b) Maintaining supplies of materials, equipment, machine and chemical; c) Identifying and recommending suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implementing maintenance schedules for equipment and machine. Managing cleaning teams: a) Executing work schedules and deployment of manpower; b) Executing effective work processes; c) Executing team improvement and capability development. Managing contracts: a) Attending site visits for potential projects; b) Assisting in preparation of tender/quotation; c) Ensuring service level agreement is fulfilled as per contract; d) Ensuring operation expenses are within budget guidelines; e) Raising requests for purchases as required within agreed limits; f) Following up on contractual payments according to credit terms; g) Negotiating in resolving contract conflicts; h) Reporting request for changes in contract terms to the management. Managing incidents: a) Guiding supervisor and team leader to respond to major incidents and emergencies; b) Validating report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Kitchen Cleaning
JOB TITLE : Kitchen Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by the cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily cleaning activities to management team and client. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule for cleaning machineries. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on-the-job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management team.

Knowledges:

Administrative; Chemistry; Customer and Personal Service; Education and Training; English/Malay Language; Mathematics; Personnel and Human Resources; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Kitchen Cleaning
JOB TITLE : Kitchen Cleaning Technician
LEVEL : 3

Job Responsibilities:

Performing cleaning services: a) Carrying out specialty cleaning according to buildings requirements; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhering to safety measures; d) Recording and reporting completed jobs. Supporting cleaning teams: a) Handling technical aspect to cleaning operation; b) Monitoring technical equipment performance to meet schedules and/or timeline; c) Managing high-end equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assisting supervisor in requesting parts replacement, if required. Integrating sustainable technology: a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring the effectiveness of the sustainability process improvement towards lesser environmental impact. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior

Knowledges:

Administrative; Chemistry; Computers and Electronics; Engineering and Technology; English/Malay Language; Mathematics; Mechanical; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Kitchen Cleaning
JOB TITLE : Kitchen Cleaning Team Leader
LEVEL : 2

Job Responsibilities:

Performing cleaning services: a) Cleaning according to buildings requirement; b) Adhering to safety measures; c) Recording and reporting completed jobs. Monitoring cleaning teams: a) Conducting induction and basic training for new cleaners; b) Conducting task briefing to cleaning teams; c) Assigning cleaning duties to cleaning teams; d) Monitoring their performance to meet schedules and/or timeline. Handling materials, equipment, machine and chemical: a) Preparing necessary cleaning tools, equipment, machine and chemicals; b) Maintaining materials, equipment, machine and chemical in good condition; c) Ensuring adequate materials, equipment, machine and chemical, as required; d) Ensuring supplies of consumable are adequate and replenished; e) Assisting supervisor in preparing stock inventory requisition. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior.

Knowledges:

Customer and Personal Service; Education and Training; English/Malay Language; Personnel and Human Resources; Production and Processing; Cleaning Science

Skills:

Active Listening; Coordination; Instructing; Monitoring; Reading Comprehension; Service Orientation; Speaking

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Integrity; Leadership; Professionalism; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Kitchen Cleaning
JOB TITLE : Kitchen Cleaning Operator
LEVEL : 1

Job Responsibilities:

Performing cleaning services: a) Cleaning according to buildings requirement; b) Adhering to safety measures c) Recording and reporting completed jobs. Handling tools, equipment and chemical; a) Preparing necessary cleaning tools, equipment and chemicals; b) Maintaining tools, equipment and chemical adequate and in good condition; c) Replenishing and replacing tools, equipment and chemical, as required. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior

Knowledges:

English/Malay Language; Personnel and Human; Cleaning Science

Skills:

Active Listening; Service Orientation

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Integrity; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Oil & Gas Cleaning
JOB TITLE : Oil & Gas Cleaning Manager
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitoring and controlling allocation of resources of project sites. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values. Managing contracts: a) Overseeing the preparation of tenders and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective actions; e) Providing solutions for contract conflicts. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive actions or measures to avoid future major incidents and emergencies.

Knowledge:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Mechanical; Personnel and Human Resources; Physics; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Science; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Oil & Gas Cleaning
JOB TITLE : Oil & Gas Cleaning Executive
LEVEL : 4

Job Responsibilities:

Managing cleaning services; a) Ensuring quality service delivery by coordinating with supervisors and clients; b) Monitoring operation expenses according to the contract budget; c) Promoting safety measures to be adhered by the cleaning team during cleaning operations; d) Assisting in improvement of work procedures and quality service delivery by reviewing operation plan; e) Collecting, compiling and analysing relevant data to recommend cleaning process improvement; f) Recording and reporting daily cleaning activities to the management team and clients; g) Conducting quality assurance with clients. Managing materials, equipment, machine, chemical and maintenance schedule; a) Allocating materials, equipment, machine and chemical to project sites; b) Maintaining supplies of materials, equipment, machine and chemical; c) Identifying and recommending suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implementing maintenance schedules for equipment and machine. Managing cleaning teams: a) Executing work schedules and deployment of manpower; b) Executing effective work processes; c) Executing team improvement and capability development. Managing contracts: a) Attending site visits for potential projects; b) Assisting in preparation of tender/quotation; c) Ensuring service level agreement is fulfilled as per contract; d) Ensuring operation expenses are within budget guidelines; e) Raising requests for purchases as required within agreed limits; f) Following up on contractual payments according to credit terms; g) Negotiating in resolving contract conflicts; h) Reporting request for changes in contract terms to the management. Managing incidents: a) Guiding supervisor and team leader to respond to major incidents and emergencies; b) Validating report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Chemistry; Customer and Personal Service; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Physics; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Oil & Gas Cleaning
JOB TITLE : Oil & Gas Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by the cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily cleaning activities to management team and client. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule for cleaning machineries. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on-the-job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management team.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; Engineering and Technology; English/Malay Language; Mathematics; Personnel and Human Resources; Physics; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Operations Monitoring; Reading Comprehension; Science; Service Orientation; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Oil & Gas Cleaning
JOB TITLE : Oil & Gas Cleaning Technician
LEVEL : 3

Job Responsibilities:

Performing cleaning services: a) Carrying out specialty cleaning according to buildings requirements; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhering to safety measures; d) Recording and reporting completed jobs. Supporting cleaning teams: a) Handling technical aspect to cleaning operation; b) Monitoring technical equipment performance to meet schedules and/or timeline; c) Managing high-end equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assisting supervisor in requesting parts replacement, if required. Integrating sustainable technology: a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring the effectiveness of the sustainability process improvement towards lesser environmental impact. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Engineering and Technology; English/Malay Language; Mathematics; Mechanical; Physics; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Operations Monitoring; Repairing; Science; Service Orientation; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Heritage Cleaning
JOB TITLE : Heritage Conservator
LEVEL : 5

Job Responsibilities:

Manage cleaning services: a) Oversee effective cleaning operation towards quality service delivery to the client; b) Enforce safety measures during cleaning operations; c) Plan cleaning operations budget; d) Plan work procedures improvement and quality service delivery; e) Analyse relevant data for cleaning process improvement; f) Conduct quality audit with client; g) Implement strategic plans and value added services to improve client relationship. Manage inventory, equipment and maintenance schedule: a) Select and suggest appropriate equipment and/or technologies and supplies for project sites; b) Ensure sufficient materials, equipment, machine, chemical; c) Recommended equipment and machineries with the new technologies suitable for business operations; d) Monitoring and controlling allocation of resources of project sites. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values. Managing contracts: a) Overseeing the preparation of tenders and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective actions; e) Providing solutions for contract conflicts. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive actions or measures to avoid future major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Building and Construction; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; English/Malay Language; Law and Government; Personnel and Human Resources; Production and Processing; Project Management; Public Safety and Security; Sales and Marketing; Transportation; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Science; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Heritage Cleaning
JOB TITLE : Heritage Assistant Conservator
LEVEL : 4

Job Responsibilities:

Managing cleaning services; a) Ensuring quality service delivery by coordinating with supervisors and clients; b) Monitoring operation expenses according to the contract budget; c) Promoting safety measures to be adhered by the cleaning team during cleaning operations; d) Assisting in improvement of work procedures and quality service delivery by reviewing operation plan; e) Collecting, compiling and analysing relevant data to recommend cleaning process improvement; f) Recording and reporting daily cleaning activities to the management team and clients; g) Conducting quality assurance with clients. Managing materials, equipment, machine, chemical and maintenance schedule; a) Allocating materials, equipment, machine and chemical to project sites; b) Maintaining supplies of materials, equipment, machine and chemical; c) Identifying and recommending suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implementing maintenance schedules for equipment and machine. Managing cleaning teams: a) Executing work schedules and deployment of manpower; b) Executing effective work processes; c) Executing team improvement and capability development. Managing contracts: a) Attending site visits for potential projects; b) Assisting in preparation of tender/quotation; c) Ensuring service level agreement is fulfilled as per contract; d) Ensuring operation expenses are within budget guidelines; e) Raising requests for purchases as required within agreed limits; f) Following up on contractual payments according to credit terms; g) Negotiating in resolving contract conflicts; h) Reporting request for changes in contract terms to the management. Managing incidents: a) Guiding supervisor and team leader to respond to major incidents and emergencies; b) Validating report on major incidents and emergencies for submission to the management.

Knowledges:

Administration and Management; Administrative; Building and Construction; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Personnel and Human Resources; Production and Processing; Project Management; Public Safety and Security; Sales and Marketing; Transportation; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Heritage Cleaning
JOB TITLE : Heritage Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by the cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily cleaning activities to management team and client. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule for cleaning machineries. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on-the-job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management team.

Knowledges:

Administrative; Building and Construction; Computers and Electronics; Customer and Personal Service; Design; Education and Training; Engineering and Technology; English/Malay Language; Personnel and Human Resources; Production and Processing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Heritage Cleaning
JOB TITLE : Heritage Cleaning Technician
LEVEL : 3

Job Responsibilities:

Performing cleaning services: a) Carrying out specialty cleaning according to buildings requirements; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhering to safety measures; d) Recording and reporting completed jobs. Supporting cleaning teams: a) Handling technical aspect to cleaning operation; b) Monitoring technical equipment performance to meet schedules and/or timeline; c) Managing high-end equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for cleaning equipment and machine; e) Assisting supervisor in requesting parts replacement, if required. Integrating sustainable technology: a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring the effectiveness of the sustainability process improvement towards lesser environmental impact. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior.

Knowledges:

Building and Construction; Computers and Electronics; Design; Education and Training; Engineering and Technology; English/Malay Language; Mechanical; Personnel and Human Resources; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Operations Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Persistence; Professionalism; Self-Control; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : External High Rise Building Cleaning
JOB TITLE : Building Cleaning Manager
LEVEL : 5

Job Responsibilities:

Managing cleaning services: a) Overseeing effective cleaning operation towards quality service delivery to the client; b) Enforcing safety measures during cleaning operations; c) Planning cleaning operations budget; d) Planning work procedures improvement and quality service delivery; e) Analysing relevant data for cleaning process improvement; f) Conducting quality audit with client; g) Implementing strategic plans and added value services to improve client relationship. Managing inventory, equipment and maintenance schedule: a) Selecting and recommending appropriate equipment and/or technologies and supplies for project sites; b) Ensuring sufficient materials, equipment, machine, chemical; c) Recommending suitable equipment and machineries with the new technologies for business operations; d) Monitoring and controlling allocation of resources to project sites. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values. Managing contracts: a) Overseeing the preparation of tender and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective action; e) Providing solutions for contract conflicts. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive action or measure to avoid future major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Mechanical; Personnel and Human Resources; Physics; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : External High Rise Building Cleaning
JOB TITLE : Building Cleaning Executive
LEVEL : 4

Job Responsibilities:

Manage Cleaning services; a) Ensure quality service delivery by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures to be adhered by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance with client. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve cleaning operations; d) Implement maintenance schedules for equipment and machine.. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes; c) Execute team improvement and capability development. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management

Knowledges:

Administration and Management; Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Mathematics; Mechanical; Personnel and Human Resources; Physics; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : External High Rise Building Cleaning
JOB TITLE : External High Rise Building Cleaning Supervisor
LEVEL : 3

Job Responsibilities:

Supervising cleaning services: a) Implementing operation plans to improve work processes; b) Deploying and assigning cleaning tasks to the cleaning team; c) Ensuring cleaning operations meet required quality standards; d) Liaising with clients at project sites; e) Ensuring safety measures are adhered by cleaning team during cleaning operations; f) Conducting joint inspection with client; g) Recording and reporting daily cleaning activities to management and client. Supervising materials, equipment, machine and chemical and maintenance schedule: a) Requisition of materials, equipment, machine and chemical in a timely manner; b) Monitoring stock control of materials, equipment, machine and chemical; c) Responsible for preventive maintenance schedule of cleaning machineries. Supervising cleaning teams: a) Planning work schedules and deployment of manpower; b) Providing guidance and on the job training to cleaners; c) Reviewing team performance on regular basis; d) Recommending process improvements to the cleaning team. Supervising incidents: a) Responding to major incidents and emergencies; b) Reporting and updating on major incidents and emergencies to the management.

Knowledges:

Administration and Management; Chemistry; Education and Training; English/Malay Language; Mathematics; Mechanical; Physics; Project Management; Public Safety and Security; Cleaning Science; Environmental

Skills:

Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : External High Rise Building Cleaning
JOB TITLE : External High Rise Building Cleaning Technician
LEVEL : 3

Job Responsibilities:

Performing cleaning services; a) Carrying out exterior high-rise cleaning; b) Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning; c) Adhering to safety measures; d) Recording and reporting completion of jobs. Supporting cleaning teams: a) Handling safety aspect to cleaning operation; b) Monitoring technical equipment performance to meet safety requirement; c) Managing high rise access equipment and machineries; d) Scheduling Planned Preventive Maintenance (PPM) for high-rise access equipment and machineries. Integrating sustainable technology; a) Identifying issues on site and recommending appropriate techniques towards sustainability goal; b) Executing technical processes involving sustainable cleaning and implementing new technology application; c) Monitoring effectiveness of the sustainability process improvement towards lesser environmental impact. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior.

Knowledges:

Administration and Management; Chemistry; Computers and Electronics; Engineering and Technology; English/Malay Language; Mathematics; Mechanical; Physics; Project Management; Public Safety and Security; Cleaning Science; Environmental

Skills:

Coordination; Critical Thinking; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Monitoring; Operations Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Sertu Services
JOB TITLE : Sertu Services Manager
LEVEL : 5

Job Responsibilities:

Managing cleaning services: a) Overseeing effective cleaning operation towards quality service delivery to the client; b) Enforcing safety measures during cleaning operations; c) Planning cleaning operations budget; d) Planning work procedures improvement and quality service delivery; e) Analysing relevant data for cleaning process improvement; f) Conducting quality audit with client; g) Implementing strategic plans and added value services to improve client relationship. Managing inventory, equipment and maintenance schedule: a) Selecting and recommending appropriate equipment and/or technologies and supplies for project sites; b) Ensuring sufficient materials, equipment, machine, chemical; c) Recommending suitable equipment and machineries with the new technologies for business operations; d) Monitoring and controlling allocation of resources to project sites. Managing cleaning teams: a) Managing work schedules and deployment of manpower; b) Managing team improvement and capability development; c) Promoting good teamwork in alignment with organisational core values. Managing contracts: a) Overseeing the preparation of tender and quotations for cleaning operations; b) Managing internal and external parties involved in contract development; c) Negotiating terms and pricing to ensure accurate execution; d) Managing contract conflicts and mitigating corrective action; e) Providing solutions for contract conflicts. Managing incidents: a) Analysing reports on major incidents and emergencies for submission to the management; b) Proposing preventive action or measure to avoid future major incidents and emergencies.

Knowledges:

Administration and Management; Administrative; Building and Construction; Chemistry; Computers and Electronics; Customer and Personal Service; Economics and Accounting; Education and Training; Engineering and Technology; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension; Science; Service Orientation; Social Perceptiveness; Speaking; Systems Analysis; Systems Evaluation; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Sertu Services
JOB TITLE : Sertu Services Executive
LEVEL : 4

Job Responsibilities:

Manage Cleaning services; a) Ensure quality service delivery which comply to syariah by coordinating with supervisor and client; b) Monitor operation expenses according to contract budget; c) Promote safety measures and syariah adherence by cleaning team during cleaning operations; d) Assist in improving work procedures and quality service delivery by reviewing operation plan; e) Collect, compile and analyse relevant data to recommend cleaning process improvement; f) Record and report daily cleaning activities to management and client; g) Conduct quality assurance and syariah adherence with client. Manage materials, equipment, machine, chemical and maintenance schedule; a) Allocate materials, equipment, machine and chemical which comply to syariah to project sites; b) Maintain supplies of materials, equipment, machine and chemical; c) Identify and recommend suitable materials, equipment, machine, chemical and technologies to improve syariah adherence and cleaning operations; d) Implement maintenance schedules for equipment and machine.. Manage cleaning teams: a) Execute work schedules and deployment of manpower; b) Execute effective work processes which comply to syariah; c) Execute team improvement and capability development. Manage contracts: a) Attend site visit for potential project; b) Assist to prepare tender/quotation; c) Ensure service level agreement is fulfilled as per contract; d) Ensure operation expenses are within budget guidelines; e) Raise requests for purchases as required within agreed limits; f) Follow up on contractual payments according to credit term; g) Negotiate in resolving contract conflicts; h) Report request for changes in contract terms to the management. Manage incidents: a) Guide supervisor and team leader to respond major incidents and emergencies; b) Validate report on major incidents and emergencies for submission to the management.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Education and Training; English/Malay Language; Law and Government; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Sales and Marketing; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Negotiation; Operation and Control; Operations Analysis; Operations Monitoring; Quality Control Analysis; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Attention to Detail; Career management; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Sertu Services
JOB TITLE : Sertu Services Supervisor
LEVEL : 3

Job Responsibilities:

Implementation of sertu services – a) performing Sertu pre-service work, b) training and guiding Sertu workforce on syariah requirements, c) performing sertu process monitoring, d) monitoring final and finishing work, e) supervising discipline, performance and welfare of Sertu workforce and f) preparing Sertu work reports. Identifying issues on site and recommending appropriate technics towards syariah compliance and sustainability goal. Applying appropriate tools, chemical, equipment and automation technology required for sustainable cleaning and syariah compliance. Executing technical processes involving syariah adherence and sustainable cleaning and implement new technology application. Monitoring effectiveness of the syariah adherence and sustainability process improvement towards lesser environmental impact.

Knowledges:

Administrative; Chemistry; Customer and Personal Service; Education and Training; English/Malay Language; Mathematics; Personnel and Human Resources; Project Management; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Judgment and Decision Making; Learning Strategies; Management of Material Resources; Management of Personnel Resources; Monitoring; Operations Monitoring; Reading Comprehension; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Leadership; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N812: Cleaning Activities
AREA : Sertu Services
JOB TITLE : Sertu Services Technician
LEVEL : 3

Job Responsibilities:

Performing cleaning services: a) Cleaning according to Islamic Syariah requirement; b) Adhering to syariah requirements and safety measures; c) Recording and reporting completion of jobs. Handling tools, equipment and chemical according to *Shariah*; b) Preparing necessary *Shariah* compliance cleaning tools, equipment and chemicals; c) Maintaining tools, equipment and chemical adequate and in good condition; d) Replenishing and replacing tools, equipment and chemical, as required. Handling incidents: a) Responding immediately to incidents and emergencies; b) Reporting abnormalities to immediate superior.

Knowledges:

Administrative; Chemistry; Computers and Electronics; Customer and Personal Service; Engineering and Technology; English/Malay Language; Mathematics; Mechanical; Public Safety and Security; Cleaning Science; Environmental

Skills:

Active Learning; Active Listening; Coordination; Critical Thinking; Equipment Maintenance; Judgment and Decision Making; Management of Material Resources; Management of Personnel Resources; Monitoring; Reading Comprehension; Repairing; Science; Service Orientation; Social Perceptiveness; Speaking; Time Management; Troubleshooting; Writing

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Attention to Detail; Concern for Others; Cooperation; Dependability; Independence; Initiative; Innovation; Integrity; Professionalism; Self-Control; Social Orientation; Teamwork

TITLE	: OCCUPATIONAL DESCRIPTION
SECTION	: (N) ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
DIVISION	: (81) SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES
GROUP	: (813) LANDSCAPE CARE AND MAINTENANCE SERVICE ACTIVITIES

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Design / Redesign / Upgrading
JOB TITLE : Landscape Manager / Landscape Architect
LEVEL : 5

Job Responsibilities:

Purpose of landscape planning and design – to understand the purpose, goal, objectives, and concept of landscape planning and design; Interpretation of landscape planning and design plan – to interpret the landscape planning and design intentions for identification of any variation, conflict, dispute, limitations and interfacing; Construction planning - to assess and propose landscape installation and construction methods; Planning of landscape installation and construction strategy – to plan and formulate broad strategy for landscape installation and construction scheduling; Administer landscape construction tender and contract – to manage landscape tender, contractual matters including budget cost estimation, and procurement, billing procedures and account; Approval process – to manage and obtain necessary approval for construction process from relevant authorities and clients

Knowledge:

Administration and Management; Administrative; Customer and Personal Service; English/Malay Language; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Environmental

Skills:

Critical Thinking; Management of Financial Resources; Management of Personnel Resources; Negotiation; Reading Comprehension; Speaking; Writing.

Attributes (Attitude):

Achievement/Effort; Analytical Thinking; Cooperation; Independence; Innovation; Integrity; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork.

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Design / Redesign / Upgrading
JOB TITLE : Landscape Executive / Landscape Designer
LEVEL : 4

Job Responsibilities:

Purpose of landscape design – to understand the purpose, goal, objectives, and concept of landscape design; Interpretation of landscape design plan – to assist in the interpretation of the landscape design intentions, variation, conflict, limitations and interfacing; Construction planning – to assist in assessing and proposing landscape installation and construction methods; Landscape installation and construction strategy – to implement broad strategy for landscape installation including on-site scheduling and manpower distribution; Quality control measures – to verify materials use and works completion as pre required by the specification; Administer landscape construction tender and contract – to implement and operate landscape tender, contractual matters including budget control billing process and account; Approval process – to assist in obtaining necessary approval for construction process from relevant authorities and clients.

Knowledge:

Botany; English/Malay Language; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Environmental

Skills:

Active Learning; Complex Problem Solving; Critical Thinking; Management of Material Resources; Management of Personnel Resources; Monitoring; Time Management; Writing.

Attributes (Attitude):

Adaptability/Flexibility; Attention to Detail; Concern for Others; Independence; Initiative; Integrity; Integrity; Leadership; Professionalism; Self-Control; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Design / Redesign / Upgrading
JOB TITLE : Design Coordinator
LEVEL : 3

Job Responsibilities:

Landscape construction drawings – to understand the purpose of design and to clarify construction methods and materials installation; Site management – to organise site mobilization including of the management of the manpower scheduling, materials and machinery as well as site safety, cleanliness and operable for construction process; Site preparation – to supervise the preparation of the site for landscape construction purposes including setting up the site for hard landscape and soft landscape features; Materials inspection – to check and validate materials used for installation and construction as per required by specification; Landscape installation and construction – to supervise the installation and construction of the landscape materials as per required by specification and construction method; Quality control measures – to verify the quality works completion as pre required by the specification.

Knowledge:

Botany; Building and Construction; Computers and Electronics; English/Malay Language; Project Management; Public Safety and Security; Environmental.

Skills:

Equipment Selection; Operation and Control; Operations Monitoring; Repairing; Time Management.

Attributes (Attitude):

Attention to Detail; Innovation; Integrity; Integrity; Leadership; Self-Control; Stress Tolerance; Teamwork.

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Garden, Park And Landscape Operations And Maintenance
JOB TITLE : Landscape Operations Manager
LEVEL : 5

Job Responsibilities:

Strategy development - to measurable objectives throughout all levels of an organizations;
Team management – to manage team, quality and cost; Operation Management – to manage on operation and improvements of management expectation for getting work done; Schedule strategy - strategies the operation schedules of maintenance requirement; Defect management - to manage repair and warranties management; Project development – to do planning, organizing, coordinating, and controlling the resources for upgrading and/or modification; Operational decision – manage and facilitate / make operational and process decisions as authorised by the management; Time management - exceptional attention to detail and time management skills.

Knowledge:

Administration and Management; Administrative; Design; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Environmental

Skills:

Administrative; Building and Construction; Design; Economics and Accounting; English/Malay Language; Law and Government; Project Management.

Attributes (Attitude):

Achievement/Effort; Adaptability/Flexibility; Analytical Thinking; Independence; Integrity; Leadership; Professionalism; Social Orientation; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Garden, Park And Landscape Operations And Maintenance
JOB TITLE : Landscape Operations Executive
LEVEL : 4

Job Responsibilities:

Team monitoring – to monitor team, quality, and cost; Report preparation - to prepare and submit report on operation and improvements of management expectation for getting work done; Schedule monitoring - monitor schedules of maintenance requirement as per planned; Site Problem - manage team and problem solving on site; Problem solving – monitor solving problems creatively; Task delegation - organizing and delegating assignments to team members.

Knowledge:

Botany; Building and Construction; English/Malay Language; Production and Processing; Public Safety and Security; Environmental.

Skills:

Complex Problem Solving; Critical Thinking; Management of Financial Resources; Management of Material Resources; Management of Personnel Resources; Monitoring; Reading Comprehension; Speaking.

Attributes (Attitude):

Achievement/Effort; Analytical Thinking; Career management; Cooperation; Independence;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Garden, Park And Landscape Operations And Maintenance
JOB TITLE : Landscape Operations Supervisor
LEVEL : 3

Job Responsibilities:

Garden maintenance coordination and demonstration - to identify any garden maintenance requirement and plan for appropriate actions according to workplace and organization procedures; Garden maintenance monitoring - to inspect and monitor all garden maintenance works whilst detect problems and make recommendation for corrective actions; Nursery operation monitoring - to inspect and monitor all garden maintenance works whilst detect problems and make recommendation for corrective actions; Garden equipment and machinery maintenance monitoring - to inspect and monitor all garden tools, equipment and machinery maintenance works whilst detect problems and make recommendation for corrective actions; Garden inventory monitoring - to inspect and update garden inventory; Manpower planning and staff welfare -to distribute manpower accordingly.

Knowledge:

Botany; Building and Construction; English/Malay Language; Production and Processing; Public Safety and Security; Transportation; Environmental.

Skills:

Complex Problem Solving; Coordination; Equipment Maintenance; Instructing; Learning Strategies; Management of Personnel Resources; Monitoring; Time Management.

Attributes (Attitude):

Career management; Concern for Others; Cooperation; Initiative; Persistence;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Garden, Park And Landscape Operations And Maintenance
JOB TITLE : Maintenance Technician
LEVEL : 2

Job Responsibilities:

Plant identification and propagation - to prepare and handle tools, equipment and materials for all plant identification and propagation works adhering to HSE rules & regulation; Pruning works - to prepare and handle tools, equipment and materials for all pruning works adhering to HSE rules & regulation; Garden pest and disease control - to prepare and handle tools, equipment and materials for all garden pest and disease control adhering to HSE rules & regulation; Plant fertilization - to prepare and handle tools, equipment and materials for all fertilizing works adhering HSE rules & regulation; Garden tools, equipment and machinery maintenance - to prepare and handle tools, equipment and materials for all garden equipment and machinery maintenance works adhering HSE rules & regulation; General Garden maintenance - to prepare and handle tools, equipment and materials for all general garden maintenance works adhering to HSE rules & regulation; Water features and water bodies maintenance - to prepare and handle tools, equipment and materials for all water bodies maintenance works adhering to HSE rules & regulation; Bonsai and topiary works - to prepare and handle tools, equipment and materials for all bonsai and topiary works adhering to HSE rules & regulation.

Knowledge:

Botany; Building and Construction; English/Malay Language; Production and Processing; Public Safety and Security; Transportation; Environmental.

Skills:

Equipment Maintenance; Reading Comprehension; Repairing; Service Orientation; Time Management.

Attributes (Attitude):

Cooperation; Dependability; Initiative; Integrity; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Garden, Park And Landscape Operations And Maintenance
JOB TITLE : Maintenance Worker
LEVEL : 1

Job Responsibilities:

Lawn and turf maintenance - to prepare and handle tools, equipment and materials for all lawn and turf maintenance works, adhering to HSE rules & regulation; Landscape trees, palms and bamboos maintenance - to prepare and handle tools, equipment and materials for all landscape trees, palms and bamboos maintenance works adhering to HSE rules and regulations.; Shrubs, ground covers and vines maintenance - to prepare and handle tools, equipment and materials for all shrubs, ground covers and vines maintenance works, adhering to Health, Safety & Environment) rules & regulation; Annuals maintenance - to prepare and handle tools, equipment and materials for all annuals maintenance works adhering to HSE rules and regulations; Aquatic plant maintenance - to prepare and handle tools, equipment and materials for all aquatic plants maintenance works adhering to HSE rules and regulations.

Knowledge:

Building and Construction; English/Malay Language; Production and Processing; Public Safety and Security

Skills:

Equipment Maintenance; Repairing; Time Management; Active Learning; Active Listening; Service Orientation; Troubleshooting.

Attributes (Attitude):

Dependability; Integrity; Persistence; Professionalism; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Turf Maintenance
JOB TITLE : Field Maintenance Manager
LEVEL : 5

Job Responsibilities:

Planning and developing a comprehensive yearly maintenance programme for landscape maintenance activities; Planning and developing maintenance programme for maintenance of irrigation and drainage systems; Planning and developing a comprehensive programme for detection, treatment and control of pest and disease infestation; Planning and developing strategies for nursery operations and management programs; Planning and developing maintenance and repairs / services of hardscape elements; Planning and managing administrative functions; Planning and strategizing supervisory functions

Knowledge:

Administration and Management; Administrative; Customer and Personal Service; Design; English/Malay Language; Law and Government; Project Management; Public Safety and Security; Environmental

Skills:

Complex Problem Solving; Coordination; Critical Thinking; Judgment and Decision Making; Learning Strategies

Attributes (Attitude):

Achievement/Effort; Analytical Thinking; Independence; Leadership; Professionalism; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Turf Maintenance
JOB TITLE : Field Executive
LEVEL : 4

Job Responsibilities:

Implement and administrate O&M programme for landscape maintenance activities; Inspect and ensure irrigation and drainage system are functioning and operating at an optimum level; Implement a systematic pest and disease control to ensure early detection of any incidents of infestation; Implement and monitor nursery programs and activities to meet the standards; Implement and monitor hardscape activities to meet the standards and maintenance strategies; Implement and monitor administrative functions as to its schedule

Knowledge:

Administrative; Building and Construction; Customer and Personal Service; Design; English/Malay Language; Law and Government; Project Management; Public Safety and Security; Environmental.

Skills:

Complex Problem Solving; Critical Thinking; Judgment and Decision Making; Learning Strategies; Management of Material Resources.

Attributes (Attitude):

Achievement/Effort; Analytical Thinking; Cooperation; Independence; Leadership; Professionalism;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Turf Maintenance
JOB TITLE : Field Supervisor / Greenkeeper
LEVEL : 3

Job Responsibilities:

Assist in operating and monitoring of turf maintenance operations; Assist in operating and monitoring softscape operational activities; Assist in operating and monitoring of irrigation and drainage functional activities; Assist in monitoring of soil fertility and soil improvement activity; Assist in monitoring and measuring pest and disease infestation for control program; Assist in complying with acceptable horticultural standards; Assist in monitoring any renovation activities; Assist in administering monitoring subcontracts works as necessary

Knowledge:

Botany; English/Malay Language; Customer and Personal Service; Design; Education and Training; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking

Attributes (Attitude):

Cooperation; Initiative; Leadership; Professionalism; Self-Control; Stress Tolerance; Teamwork

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Turf Maintenance
JOB TITLE : Field Team Leader / Assistant Greenkeeper
LEVEL : 2

Job Responsibilities:

Perform turf maintenance; Perform and record softscape activities; Perform and record the functionality of irrigation and drainage activity; Perform and record issues on soil fertility activity; Perform and record issues on pest and disease control program; Perform and record the status of horticultural practice; Perform record the status of administrative functions.

Knowledge:

Botany; English/Malay Language; Public Safety and Security; Transportation; Environmental

Skills:

Equipment Maintenance; Instructing; Monitoring; Operation and Control; Repairing; Speaking; Writing.

Attributes (Attitude):

Cooperation; Initiative; Integrity; Stress Tolerance; Teamwork; Attention to Detail; Career management; Concern for Others; Self-Control

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Landscape Turf Maintenance
JOB TITLE : Lawn Care Worker / Landscaper
LEVEL : 1

Job Responsibilities:

Perform turf maintenance based on approved schedules and methods; Perform softscape activities based on approved programmes and methods; Perform maintenance of irrigation and drainage activity as scheduled and based on methods; Perform soil conditioning and improving soil fertility activity; Perform inspection and/or treatment on pest and disease control programmes; Perform maintenance tasks based on standard horticultural practices; Perform turf renovation activities.

Knowledge:

Botany; English/Malay Language; Public Safety and Security; Transportation

Skills:

Active Learning; Equipment Maintenance; Repairing; Speaking; Active Listening; Troubleshooting; Social Perceptiveness; Time Management.

Attributes (Attitude):

Teamwork; Integrity; Professionalism; Stress Tolerance; Initiative.

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Tree Care
JOB TITLE : Landscape Operations Manager /Arborist / Horticulturist
LEVEL : 5

Job Responsibilities:

Tree installation and establishment - to perform tree selection, plan planting site, perform planting work, perform transplanting work and prepare stakeholder report on tree installation and establishment; Tree risk management - to analyse tree risk assessment requirement, perform tree risk assessment, perform tree risk mitigation work and prepare stakeholder report on tree risk management; Arborist's safety management - to plan site and personal safety, manage tree workers safety, manage public safety and prepare stakeholder report on arborist's safety management; Tree protection works during construction - to manage tree protection works during construction, manage tree support and lightning protection, prepare stakeholder report on protection works during construction; Arboriculture managerial function - to manage stakeholder, produce job sheet, manage arboriculture team, validate arborist's report, manage urban forestry program and manage inventory system.

Knowledge:

Administration and Management; Design; Engineering and Technology; English/Malay Language; Law and Government; Project Management; Public Safety and Security; Environmental

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Instructing; Judgment and Decision Making; Learning Strategies; Negotiation; Reading Comprehension; Social Perceptiveness; Speaking; Writing.

Attributes (Attitude):

Achievement/Effort; Analytical Thinking; Career management; Cooperation; Independence; Initiative; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance.

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Tree Care
JOB TITLE : Landscape Operations Executive / Assistant Arborist / Assistant Horticulturist
LEVEL : 4

Job Responsibilities:

Tree identification - to analyse tree identification requirement, collect tree parts sample, analyse tree morphological characteristic and prepare tree identification work report; Soil assessment - to determine location of soil sampling, collect soil sample, perform soil moisture test, perform ponding test, perform soil compaction test and prepare soil assessment work report; Tree irrigation and drainage development - to analyse tree water requirement based on tree species, inspect irrigation system functionality, inspect drainage system functionality, perform water irrigation and prepare water irrigation & drainage work report; Tree fertilization - to analyse tree fertilization requirement, analyse nutrient deficiency symptom on trees, perform sample collection for foliar analysis, perform tree fertilization and prepare tree fertilization work report; Tree pruning - to plan tree pruning works, prepare pruning tools and equipment, perform pruning work at site and prepare pruning work report.; Plant health care (PHC) management - to perform preventive measure on PHC, diagnose tree abnormality due to pest, diagnose tree abnormality due to diseases, diagnose tree abnormality due to abiotic factors, perform sample collection for laboratory analysis, prepare pest & diseases control tools & equipment, perform pest & diseases control and prepare PHC work report; Tree inventory and inspection - to perform tree data collection, perform tree condition inspection and perform data entry into tree inventory system; Working in trees - to analyse working in trees requirements, assess tree condition, check climbing equipment condition, perform tree climbing, operate tools and equipment in trees, perform tree felling, perform emergency response & aerial rescue and prepare working in trees work report

Knowledge:

Administration and Management; Computers and Electronics; Education and Training; Engineering and Technology; English/Malay Language; Project Management; Public Safety and Security; Botany; Design; Customer and Personal Service; Production and Processing; Environmental

Skills:

Active Learning; Coordination; Equipment; Maintenance; Operation; Control; Operations; Monitoring

Attributes (Attitude):

Achievement/Effort; Analytical Thinking; Attention to Detail; Career management; Cooperation; Independence; Initiative; Leadership; Persistence; Professionalism; Self-Control; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Hardscape Maintenance
JOB TITLE : Hardscape Executive
LEVEL : 4

Job Responsibilities:

Hardscape inventory and inspection planning – to periodically plan the hardscape inventory and inspection schedule based on the site need; Maintenance strategies planning – to plan the hardscape maintenance strategies for problem's prevention; Maintenance operation arrangement – to arrange short term and long-term hardscape maintenance operation; Maintenance budgeting – to analyse and project the hardscape maintenance budgeting; Manpower planning – to prepare and distribute the manpower needed based on task.

Knowledge:

Administration and Management; Design; Economics and Accounting; Education and Training; Law and Government; Personnel and Human Resources; Project Management; Public Safety and Security; Building and Construction; Environmental.

Skills:

Complex Problem Solving; Critical Thinking; Judgment and Decision Making; Management of Financial Resources; Management of Personnel Resources; Negotiation; Operations Analysis; Quality Control Analysis; Speaking; Time Management.

Attributes (Attitude):

Achievement/Effort; Career management; Independence; Initiative; Integrity; Leadership; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Hardscape Maintenance
JOB TITLE : Hardscape Supervisor
LEVEL : 3

Job Responsibilities:

Inventory and inspection monitoring - to inspect and update the site's inventory and inspection; Maintenance coordination and demonstration – to coordinate the hardscape maintenance work based on schedule; Maintenance monitoring – to monitor the hardscape maintenance work as per targeted objectives; Hardscape equipment and machinery monitoring – to identify the types of equipment's and machineries needed for the hardscape maintenance work; Hardscape testing – to test the repaired hardscaped components; Workers monitoring and supervising - to manage the planned workers distribution and enforce their safety and wellbeing rules and regulations. To monitor the workers scope and quality of works

Knowledge:

Building and Construction; Design; Education and Training; Engineering and Technology; English/Malay Language; Personnel and Human Resources; Environmental

Skills:

Complex Problem Solving; Critical Thinking; Instructing; Time Management; Speaking; Coordination; Judgment and Decision Making; Management of Material Resources; Monitoring; Operations Monitoring; Persuasion; Quality Control Analysis; Reading Comprehension.

Attributes (Attitude):

Initiative; Integrity; Leadership; Persistence; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Hardscape Maintenance
JOB TITLE : Hardscape Technician / Maintenance Technician
LEVEL : 2

Job Responsibilities:

Hardscape inspection – to run a routine hardscape inspection based on the report or normal routine inspection; Hardscape cleaning – to run the hardscape cleaning; Hardscape repairing – to repair or replace the broken or damages hardscape components; Hardscape damages prevention – to prepare and handling all the equipment and materials for hardscape damages preventions; Hardscape tools, machineries and equipment - to prepare and handle tools, machineries, equipment and materials for hardscape maintenance works based on the best practices rules & regulation.

Knowledge:

Building and Construction; English/Malay Language; Production and Processing; Public Safety and Security; Education and Training; Engineering and Technology; Environmental

Skills:

Equipment Maintenance; Instructing; Monitoring; Repairing; Service Orientation; Time Management; Troubleshooting.

Attributes (Attitude):

Integrity; Persistence; Professionalism; Self-Control; Stress Tolerance; Teamwork; Cooperation; Dependability; Innovation

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Hardscape Maintenance
JOB TITLE : Hardscape Worker / Maintenance Worker
LEVEL : 1

Job Responsibilities:

Hardscape inspection – to perform a routine hardscape inspection based on the report or normal routine inspection; Hardscape cleaning – to perform the hardscape cleaning; Hardscape repairing – to perform repairing task of damages hardscape components.; Hardscape damages prevention – to perform hardscape damages preventions tasks.; Hardscape tools, machineries and equipment - to perform, prepare and handle tools, machineries, equipment and materials for hardscape maintenance works based on the best practices rules & regulation.

Knowledge:

Building and Construction; Transportation; English/Malay Language; Mechanical; Production and Processing; Public Safety and Security.

Skills:

Active Learning; Equipment Maintenance; Repairing; Time Management; Speaking; Active Listening.

Attributes (Attitude):

Teamwork; Integrity; Professionalism; Stress Tolerance; Cooperation; Dependability; Initiative; Persistence;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Sustainable Landscape Management
JOB TITLE : Quality Control And Sustainability Manager
LEVEL : 5

Job Responsibilities:

Sustainable framework development - to interpret sustainable management policy and objectives, initiating sustainable management committee, manage sustainable training programme and establish sustainable programmes; Green procurement planning - to help verify green vendors, help in analysing LCC for landscape, help verify green products and services criteria, help in approval process of procuring / managing green products and services including service contracts; 3R programme planning - to prepare awareness programme, verify 3R inspection report and review 3R performance monitoring report; Energy management planning - to coordinate / perform energy audit report, prepare energy saving action plan, prepare energy efficiency programme & resources, periodically reviewing energy performance monitoring report and review energy efficiency programme.; Water management planning – to establish reports on water consumption and perform monitoring water usage, conduct and review water savings programme, ensure the availability of alternative source of water supply; LCC planning - to assess LCC costing data requirement, verify LCC data and populate LCC report.; Local community participation planning - to interpret policy and target for local community sustainability programme, to plan and review the effectiveness of sustainability program for local community; Environmental management practices - to manage cleaner production (CP) / material flow cost accounting (MFCA), coordinate air, water and noise pollution control activities; IAQ planning - to develop and provide IAQ programme, provide IAQ resources and review IAQ report.

Knowledge:

Administration and Management; Design; Project Management; Customer and Personal Service (3 times); Economics and Accounting (3 times); Education and Training (3 times); English/Malay Language (3 times); Law and Government (3 times); Personnel and Human Resources (3 times); Public Safety and Security; Environmental

Skills:

Complex Problem Solving; Critical Thinking; Management of Financial Resources; Management of Personnel Resources; Negotiation; Operations Analysis; Persuasion; Quality Control Analysis; Reading Comprehension; Time Management.

Attributes (Attitude):

Career management; Cooperation; Independence; Initiative; Innovation; Integrity; Leadership; Professionalism; Self-Control; Social Orientation; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Sustainable Landscape Management
JOB TITLE : Quality Control And Sustainability Executive
LEVEL : 4

Job Responsibilities:

Sustainable implementation framework - to implement and monitor sustainable implementation framework and to execute training programme as well as produce training report; Green procurement process evaluation - to implement and evaluate green vendor application, assist in performing LCC costing analysis, evaluate green products and services criteria, evaluate green products and services procurement and monitor green products and services procurement; 3R programme coordination - to coordinate wastes inspection, set up target or performance indicator, submit 3R plan activities, organise awareness programme, monitor 3R activities and produce 3R status report; Energy management plan coordination - to propose / monitor performance indicator, assist in coordinating training programme, execute training programme, assist coordinating energy audit, assist analyse energy data, produce energy performance report and coordinate energy saving measures and performance monitoring; Water management plan coordination - to assist in coordinating consumption identify status of water savings programme resources and assist in supervising alternative resource of water supply; LCC evaluation - to identify and measure LCC data requirement, assist in reviewing LCC data, assist in performing LCC costing (LCC) and prepare periodic LCC report; Local community participation coordination - to propose sustainability activities for local community, propose sustainability programme for local community to superior for approval and monitor effectiveness of sustainability program for local community; IAQ evaluation - to identify resource required to perform IAQ assessment, produce IAQ report and monitor rectification work

Knowledge:

Administration and Management; Design; Project Management; Building and Construction; Customer and Personal Service; Education and Training; English/Malay Language; Personnel and Human Resources; Public Safety and Security; Environmental.

Skills:

Active Learning; Active Listening; Complex Problem Solving; Coordination; Critical Thinking; Equipment Maintenance; Instructing; Quality Control Analysis; Reading Comprehension; Time Management; Writing.

Attributes (Attitude):

Cooperation; Concern for Others; Independence; Initiative; Innovation; Integrity; Leadership; Self-Control; Stress Tolerance; Teamwork;

MSIC DIVISION : N81 Services To Buildings And Landscape Activities
MSIC GROUP : N813 Landscape care and maintenance service activities
AREA : Sustainable Landscape Management
JOB TITLE : Quality Control And Sustainability Supervisor
LEVEL : 3

Job Responsibilities:

Green procurement handling and identification - to operate registered green vendors, checking on identified green products and services criteria, checking on LCC data, assist in procuring green products and services criteria and monitor receive green products and services; 3R programme implementation – to collect and report on waste data, assist on execution of 3R activities, assist in carrying out awareness program and assist in performing 3R inspection; Energy management implementation - to conduct daily toolbox training, carry out training programme, collect energy audit data, execute energy savings measures (EMS) and monitor energy related activities; Water management implementation - to collect baseline data of water consumption, collect water reduction performance monitoring programme data, rectify water wastage, perform water savings measures and implement alternative source of water supply; Water management implementation - to collect baseline data of water consumption, collect water reduction performance monitoring programme data, rectify water wastage, perform water savings measures and implement alternative source of water supply; IAQ implementation – to assist in collection of IAQ data, verify equipment functioning and calibrating, assist in conducting IAQ assessment, and execute rectification work.

Knowledge:

Building and Construction; Botany; Chemistry; Production and Processing; Transportation; Environmental

Skills:

Coordination; Equipment Maintenance; Instructing; Learning Strategies; Monitoring; Operations Monitoring; Repairing; Time Management; Troubleshooting.

Attributes (Attitude):

Concern for Others; Cooperation; Stress Tolerance; Teamwork; Attention to Detail; Dependability; Initiative; Integrity; Self-Control; Achievement/Effort.

ANNEX 3: LIST OF CONTRIBUTORS

**N81 - SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES
OCCUPATIONAL FRAMEWORK DEVELOPMENT COMMITTEE**

RESEARCHERS

No.	Name	Designation	Organisation
1	Professor Dr Norlidah Alias	Lead Researcher	UPUM Sdn. Bhd.
2	Ts. Ihsanulfitri Zahedi	Project Manager	UPUM Sdn. Bhd.
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4	LAr. Dr. Mohd Sallehuddin Mat Noor	Researcher	Universiti Putra Malaysia / UPUM Sdn. Bhd.
5	Zelfi Safitri Binti Musrizal	Researcher Assistant	Universiti Putra Malaysia / UPUM Sdn. Bhd.
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3	Ir. Saparudin Lolong	Jurutera Elektrik Penguasa	Jabatan Kerja Raya
4	Ts Dr Saharani Jaafar	Pengarah	SRS Knowledge Fusion Sdn Bhd
5	Noruddin Haji Idris	President / Managing Director	Persatuan Kontraktor Perkhidmatan Pencucian Malaysia (MACC) / Q-Services Sdn. Bhd.
6	Azizah Man	Secretary / Managing Director	Persatuan Kontraktor Perkhidmatan Pencucian Malaysia (MACC) / Khidmat Bersih Sdn. Bhd.
7	Hj Faizal Rahim Hj Moidunny	Timbalan Pengarah Urusan	Harta Maintenance Sdn Bhd
8	Nik Husin Nik Yusoff	Pengurus Besar	Exclusive Pillar (M) Sdn Bhd
9	Syed Mohd Jala Loi Lail	Senior Manager, Adminitration	Sinar Global Academy Sdn. Bhd.

10	Prof Madya LAr Dr Suhardi Maulan	Prof Madya	Jabatan Senibina Landskap, Fakulti Rekabentuk dan Senibina, UPM
11	Zainuddin Daud	Facilities Management Trainer	Equal Trade
12	Ts. Emran @ Zahrin Mohamad Taram	Pensyarah Kanan	Jabatan Senibina Landskap, Fakulti Rekabentuk dan Senibina, UPM
13	Rozita Awang	Arkitek Landskap	Majlis Perbandaran Kulim
14	Siti Sarah Khairul Aziz	Managing Director	Siti Sarah Resources
15	Assoc. Prof. Dr. Siti Aida Bt Samikon	Dean Limkokwing Graduate School	Limkokwing University of Creative Technology
16	Mohd Sopian Mohd Zin	Ketua Bahagian Pengurusan Aset Zon Akademik	Universiti Putra Malaysia
17	Chandran Thambiraja	Director	RC Construction Sdn. Bhd.
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18	Muhammad bin Bahauddin	Pembantu Operasi	Universiti Putra Malaysia
20	Tony Clifford	Chief Executive Officer	Suria Mentari Cleaning Services Sdn.Bhd
21	Ahmad Affendi Md Yusop	Pegawai pertanian	Universiti Putra Malaysia
22	Mohd Syukri bin Yusof	Senior Executive, Landscape	Sime Darby Property Berhad

AHLI JAWATANKUASA TEKNIKAL PENILAIAN OF SIRI 1

14 September 2023

No.	Name	Designation
1.	Dr Tan Kea Cheng	Penolong Pengarah Kanan, Unit Skills Malaysia Negeri Pulau Pinang, JPK Wilayah Utara
2.	Prof Madya LAr Ts Dr Nurhayati Abdul Maleek	Coordinator, Landscape Architecture, College of Built Environment, Universiti Teknologi MARA

No.	Name	Designation
3.	Prof Madya Ts Dr Emma Marinie Ahmad Zawawi	Dean (Academic & International), College of Built Environment, Universiti Teknologi MARA
4.	Ir Dr Ahmad Firdauz Abdul Mutalib	Jurutera Awam Penguasa Kanan, Unit Perundingan Pengurusan Aset Kerajaan, Bahagian Perundingan Pengurusan Aset, Cawangan Perancangan Aset Bersepadu, Jabatan Kerja Raya
5.	Pn Nurul Natashadia Kassim	Assistant Director, Methodology & Research Division, Department of Statistics Malaysia
6.	En Nur Hafiz Mohamad Noor	Senior Assistant Director, Services Statistics Division, Department of Statistics Malaysia
7.	Ts Kodsiah Mohd Juzad	Penolong Setiausaha, Bahagian Dasar, Kementerian Sumber Manusia
8.	Ar Ainul Rahman Abd Rahim	Managing Director, Area Architect Sdn Bhd
9.	En Hazman Md Zaki	Pegawai Pertanian, Jabatan Landskap dan Taman, Bahagian Pengurusan & Penyelenggaraan Landskap, Seksyen Taman & Kawasan Protokol, Perbadanan Putrajaya

AHLI JAWATANKUASA TEKNIKAL PENILAIAN OF SIRI 2
11 Januari 2024

No.	Name	Designation
1.	Pn Khadijah Isaak	Ketua Penolong Pengarah, Unit Pengurusan Kerangka Pekerjaan, Bahagian Standard Pekerjaan dan Kurikulum TVET
2.	En Nazrul Hilmi Mohammad	Penolong Pengarah, Unit Kerangka Pengurusan Pekerjaan Bahagian Standard Pekerjaan dan Kurikulum TVET
3.	Pn Wan Suriani Wan Yusoff	Pegawai Pembangunan Kemahiran, Unit Pengurusan Kerangka Pekerjaan

No.	Name	Designation
		Bahagian Standard Pekerjaan dan Kurikulum TVET
4.	En Nur Hafiz Mohamad Noor	Senior Assistant Director, Services Statistics Division, Department of Statistics Malaysia
5.	Ts Kodsiah Mohd Juzad	Penolong Setiausaha, Bahagian Dasar, Kementerian Sumber Manusia
6.	Prof Madya LAr Ts Dr Nurhayati Abdul Maleek	Coordinator, Landscape Architecture, College of Built Environment, Universiti Teknologi MARA
7.	Prof Madya Ts Dr Emma Marinie Ahmad Zawawi	Dean (Academic & International), College of Built Environment, Universiti Teknologi MARA
8.	Ir Dr Ahmad Firdauz Abdul Mutalib	Jurutera Awam Penguasa Kanan, Unit Perundingan Pengurusan Aset Kerajaan, Bahagian Perundingan Pengurusan Aset, Cawangan Perancangan Aset Bersepadu, Jabatan Kerja Raya
9.	En Hazman Md Zaki	Pegawai Pertanian, Jabatan Landskap dan Taman, Bahagian Pengurusan & Penyelenggaraan Landskap, Seksyen Taman & Kawasan Protokol, Perbadanan Putrajaya

AHLI JAWATANKUASA TEKNIKAL DALAMAN

No.	Name	Designation
1.	Pn Wan Suriani Wan Yusoff	Pegawai Pembangunan Kemahiran, Unit Pengurusan Kerangka Pekerjaan Bahagian Standard Pekerjaan & Kurikulum TVET
2.	Dr Khuzainey Ismail	Penolong Pengarah Kanan, Unit Perancangan Dasar 2, Bahagian Perancangan, Pembangunan & Antarabangsa
3.	Dr Saidi Zain	Ketua Penyelaras Program (Penyelidikan) Unit Penyelidikan Inovasi (RI)

No.	Name	Designation
		Pusat Latihan Pengajar & Kemahiran Lanjutan (CIAST)
4.	Dr Fairus Atida Said	Penolong Kanan Pengarah Unit PPT (Putrajaya) Bahagian Pensijilan Kompetensi
5.	Ts Dr Wan Nasarudin Wan Jalal	Ketua Penolong Pengarah Unit Pentauliahahan SLaPB Bahagian Pentauliahahan (BPT)
6.	En Norazmi Mokni	Ketua Penolong Pengarah Unit Pengurusan ILB Bahagian Hubungan Industri & Kerjasama Strategik
7.	Dr Muhamad Azuddin Hassan	Ketua Penyelaras Program (Penyelidikan) Unit Penyelidikan Inovasi (RI) Pusat Latihan Pengajar & Kemahiran Lanjutan (CIAST)

ANNEX 4: CONFERENCE PROCEEDING

Certificate

OF PRESENTATION

This is to certify that

To LAr Dr Adam Aruldewan S. Muthuveeran

has successfully presented a paper titled

*Development Of Occupational Framework (OF) For Malaysian
Services to Buildings and Landscape Activities (N81) Sector Based on
MSIC 2008*

**in the International Conference on Sustainability
Education Development 2023 (ICSED 2023)**

Organised by the Faculty of Education, Universiti Malaya,
Malaysia, 25-26 October 2023



Assoc. Prof. Dr. Zawawi Ismail

Dean, Faculty of Education
University of Malaya



Dr. Zamzami Zainuddin

Chair of the conference



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OCCUPATIONAL FRAMEWORK
MSIC N81

SECTION N : ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
DIVISION 81 : SERVICE TO BUILDINGS AND LANDSCAPE ACTIVITIES

2024