OCCUPATIONAL FRAMEWORK
PORT SERVICES INDUSTRY

JABATAN PEMBANGUNAN KEMAHIRAN
KEMENTERIAN SUMBER MANUSIA

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Occupational Framework
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ABSTRACT

An Occupational Framework (OF) is the process of identifying the work scope of the occupational areas in terms of competencies. It is used to analyse skilled human resource competency requirement for the industry. The development of the Occupational Structure is a preliminary process in developing relevant National Occupational Skills Standard (NOSS). The NOSS in turn will be developed to be used as the basis to conduct skills training and certification of competent personnel. This document is divided into several chapters, the first two chapters being an industrial overview highlighting the definition and scope of the industry, the current analysis of the local industry and its skilled worker requirements, Government bodies and development plans supporting the growth of the industry, then the next chapter will explain the methodology used in Occupational Framework development such as qualitative analysis through brainstorming discussion sessions. Workshops were held to get a better understanding of the organisational structure, job titles, hierarchy objectives and main activities of the specified positions. The final chapters will present the findings of the Occupational Framework that is translated into the Occupational Structures, levels of competencies and critical job areas. These findings will in turn be the basis of reference for the development of the National Occupational Skills Standard (NOSS) document. The NOSS will serve not only as a reference of skills standards for certification but also as a guide to develop the skills training curriculum. In order to conduct the Occupational Framework on the Port Services Industry, all the information related to the aforesaid industry was gathered through literature review, surveys and further discussed in workshop sessions with experts from the industry.

TABLE OF CONTENTS

ANNEXURES

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

DESCUM	Development of Standard and Curriculum
DSD	Department of Skills Development
OF	Occupational Framework
OD	Occupational Description
OS	Occupational Structure
MOSQF	Malaysian Occupational Skills Qualification Framework
MQA	Malaysia Qualification Agency
MSC	Malaysian Skills Certificate
NOSS	National Occupational Skills Standard
VHF	Very High Frequency

CHAPTER 1: INTRODUCTION

1.1 CHAPTER INTRODUCTION

This chapter will explain the objectives, scope and problem statement of the Occupational Framework for the Port Services Industry. The concept of Occupational Framework and its function in skills training and curriculum development is also elaborated in this chapter.

There have been various National Occupational Skills Standard (NOSS) documents developed for the Port Services Industry. However, a complete analysis on the Occupational Structure of the Port Services Industry has not been undertaken before this. Therefore, in order to identify the overall structure and available career paths in the industry, the Occupational Framework must be done on the Port Services Industry.

Below are descriptions of important elements of the research.

i) National Skills Development Act 2006 (Act 652)

The National Skills Development Act 2006 (Act 652) came into effect on 1st September 2006 after it was officially gazetted on 29th June 2006, with the mandate of promoting, through skills training, the development and improvement of a person's abilities, which are needed for vocation, and to provide for other matters connected therewith. The Act 652 is significant because for the first time in the history of skills training in Malaysia, a national legislation has been enacted solely and exclusively for skills training and development. In addition, the meaning and scope of skills training has been clarified and given a statutory interpretation that can be used to distinguish it from other components of the country's national education and training system. The Act 652 also provides for the implementation of a Malaysian Skills Certification System, leading to the award of five (5) levels of national skills qualification, namely Malaysian Skills Certificate Level 1,2 and 3; Malaysian Skills Diploma; and Malaysian Skills Advanced Diploma.

ii) Malaysia Qualification Framework (MQF)

The Malaysia Qualification Framework refers to the policy framework that satisfies both the national and international recognized qualifications. It comprises of titles

and guidelines, together with principles and protocols covering articulation and issuance of qualifications and statements of attainment. Element of qualification framework indicate the achievement for each qualification title. It will also provide progression routes for all the graduates in the respective occupational fields.

The MQF has eight levels of qualification in three sectors and supported by lifelong education pathways as shown in the chart 1. JPK governs the skills sector, in which there are five (5) levels of skills qualification. The definition for each level of skills qualification is specified in Malaysian Occupational Skills Qualification Framework (MOSQF).

<table>
<tr><th rowspan="2">MQF Levels</th><th colspan="3">Sectors</th><th rowspan="2">Lifelong Learning</th></tr>
<tr><th>Skills</th><th>Vocational and Technical</th><th>Higher Education</th></tr>
<tr><td>8</td><td rowspan="3"></td><td rowspan="3"></td><td>Doctoral Degree</td><td rowspan="9">Accreditation of Prior Experiental Learning (APEL)</td></tr>
<tr><td>7</td><td>Masters Degree</td></tr>
<tr><td>6</td><td>Bachelors Degree</td></tr>
<tr><td>5</td><td>Malaysian Advanced Skills Diploma</td><td>Advanced Diploma</td><td>Advanced Diploma</td></tr>
<tr><td>4</td><td>Malaysian Skills Diploma</td><td>Diploma</td><td>Diploma</td></tr>
<tr><td>3</td><td>Malaysian Skills Certificate 3</td><td rowspan="3">Vocational and Technical Certificate</td><td>Certificate</td></tr>
<tr><td>2</td><td>Malaysian Skills Certificate 2</td><td rowspan="2"></td></tr>
<tr><td>1</td><td>Malaysian Skills Certificate 1</td></tr>
</table>

Figure 1.1: MQF Chart

iv) National Occupational Skills Standard (NOSS)

National Occupational Skills Standard (NOSS) is defined as a specification of the competencies expected of a skilled worker who is gainfully employed in Malaysia for an occupational area, level and pathway to achieve the competencies and is gazetted in Part IV of National Skills Development Act 652. NOSS is developed by the industry experts based on the needs of the industry and is utilized as the main tool in the implementation of Malaysian Skills Certification System in which the

performance of existing industry workers and trainees are assessed based on NOSS for awarding of Malaysian Skills Certificate.

v) Competency Based Training (CBT)

Competency Based Training (CBT) is an approach to vocational training which emphasizes on what a person can do in a work place as a result of education and training obtained. CBT is based on performance standards which are set by the industry with main focus on measuring the performance while taking into account knowledge and attitude rather than the duration taken to complete the course. CBT is a learner-centric; outcome-based approach to training which allows each individual to develop skills at their own pace for a similar outcome, thus meaning training practices can be customized for each individual to achieve a similar outcome. CBT concept is the basis of Malaysian Skills Certification system which is coordinated by JPK.

1.2 OBJECTIVE OF STUDY

The objectives of the study are as below:

- To produce occupational structure (OS) from data analysis, interviews, site visits and focus group;
- To determine job descriptions of each job title from the OS; and
- To investigate the skills in demand in the industry.

1.3 SCOPE OF STUDY

The scope of work for the study to develop occupational framework are as listed below:

- To conduct literature review on the current industry;
- To consult with relevant industry representatives to obtain expert input from industry;
- To develop, disseminate and analyze survey and questionnaire's data from industries via industry representatives;
- To perform focus group discussion with the industry representatives, interviews, and/or any other methods in order to achieve the study outcome.

1.4 BACKGROUND OF THE PORT SERVICES INDUSTRY IN MALAYSIA

The dramatic transformation and rapid industrialization of Malaysia's economy over the last few decades has made it into one of the world's major trading nations. Ports went through intensive growth and tremendous development during the period of rapid economic development in the country and the South East Asian region in the 1980s and 1990s. The well thought-out infrastructure development policies of the government, has brought about well-developed transportation infrastructure and facilities such as highways, railways, airports and especially ports.

Realizing the need to meet the challenge of matching its transport sector's efficiency with its rapidly growing industrialized economy, Malaysia has put in place an infrastructure development plan focusing on inter-connectivity among various transport modes.

The country's major seaports in Penang, Port Klang and Tanjung Pelepas are located along the coast of the Straits of Malacca. This is not coincidental as the west coast of Peninsular Malaysia is where the majority of the population resides and most economic activities take place, hence enjoying better transportation and connections compared to other areas of the country.

Since the late 1980s, many national and state-level governments have adopted institutional reforms in the port sector, such as privatization, corporatization, and disintegration of terminal operation functions from the government's hands (World Bank, 2001). One of the best examples of port privatization is Port Klang which has been privatized to Klang Container Terminal Berhad in 1986. According to *Md Nor* et al.,(2003), the privatization of Port Klang has led to the improvement of overall port efficiency.

Ports in the country are either under the purview of the Federal Government or the State Government. There are 80 ports administered by the Federal Government, under the jurisdiction of the Ministry of Transport. The ports in Sabah are governed by Sabah Ports Authority, while Sarawak has three separate port authorities supervising the ports in Kuching, Rajang and Miri.

The research aims to identify the demand in the Port Services Industry based on the Occupational Framework of the Port Services Industry. This is imperative as currently there is no existing research on the workforce requirement in the Port Services Industry.

1.5 CHAPTER CONCLUSION

In light of recent economic development plans by Malaysia in the Port Services Industry, the demand for sufficient skilled personnel has increased and the development of skilled manpower is crucial. With the Occupational Structure clearly defined, the industry stakeholders will be able to identify sub-areas that will require more intensive efforts in human capital development. Although there have been past efforts in National Standards Development for the industry, the need for an Occupational Framework is required to determine the overall areas that may not yet have been focused on. The Occupational Structure that will be the outcome of this analysis shall be utilised as a 'blueprint' of the manpower planning for the Port Services Industry.

CHAPTER 2: LITERATURE REVIEW

2.1 CHAPTER INTRODUCTION

This chapter will focus on the explanation of the Port Services Industry, the current scenario in Malaysia, introduction to government policies, development plans, government bodies and industrial competitiveness at the international level pertaining to the Port Services Industry.

Findings in this chapter were obtained via literature review, observation, interviews with industry practitioners and discussions during workshops with development panel members. This literature review will be further discussed with panel members to obtain insight on the matters at hand from a practitioner's perspective.

2.2 STAKEHOLDERS

The stakeholders of Port Services Industry include:-

a) Regulatory and Statutory Bodies

These are the Government Agencies that are empowered by the legislations according to the scope and powers given in the Act that directly regulates the ports in Malaysia.

b) Port Operators

Port operators are organisations, either public-owned or private companies that manage and operate the port activities, such as cargo handling and transshipment. However, the port operators listed are based on available literature.

c) Port Associations

Malaysia ports associations or international associations that are actively complementing and assisting the industry, in terms of expertise and advice to position Malaysia as one of the major ports in the world.

Refer to Table 2.1 for the list of stakeholders in the Port Services Industry

Table 2.1 : List of Stakeholders in Port Services Industry

NO.	ORGANISATIONS	ROLES, FUNCTIONS AND RESPONSIBILITIES
A.	**REGULATORY BODIES**	
1.	**Maritime Division, Ministry of Transport Malaysia**	The functions of Maritime Division are: • To encourage Malaysian entrepreneurs to participate in the domestic and international shipping industry; • To formulate policies on navigational safety, pollution prevention from ships, ship's operation, seafarer's affairs, safety and third party liabilities; • To formulate policies, coordinate and oversee activities of federal ports; • To ratify and implement international convention and to amend domestic regulation according to the requirements; • To strengthen international cooperation through maritime transport agreements/ memorandum of understanding and human capital development programs; and • To process and issue domestic shipping license.
2.	**Marine Department, Ministry of Transport Malaysia**	The responsibility of Marine Department includes:- • Safety of navigation • Prevention of pollution from ships • Management of the small ships • Operation of secondary ports
3.	**Sabah Ports Authority**	The Sabah Ports Authority (SPA) is a state statutory body established in 1968 by the SPA Enactment 1967 which was repealed and replaced by the SPA Enactment 1981. The Authority is under the jurisdiction of the Ministry of Infrastructure Development, Sabah. Sabah Ports Authority will act as the regulatory authority responsible related to port activities and will ensure the terminal operator who operates the server ports in Sabah with the privatisation agreement fully and set standards plus benchmark for port operations comparable with ports in the region.

NO.	ORGANISATIONS	ROLES, FUNCTIONS AND RESPONSIBILITIES
4.	**Sarawak Port Authority**	Sarawak Port Authority, established by the Port Authorities Ordinance, 1961, under the Ministry of Development, Sarawak. An Ordinance to provide for the establishment of Port Authorities for certain Ports, for the functions of such authorities and for matters connected therewith and incidental thereto.
5.	**Miri Port Authority**	Miri Port Authority (MPA) was established on 1st February 1981 under Section 3 of The Port Authorities Ordinance, 1961. MPA is a State Statutory Body under the Ministry of Infrastructure Development and Communications, Sarawak. MPA is located within a vast industrial estate at Kuala Bara in Miri, provides services such as: • Handling of containerised cargo, liquid bulk cargo, timber products and to other general cargo • Provision of wet storage facilities or oil & gas industry • Diesel distribution facilities at Miri Port
6.	**Kuching Port Authority**	Kuching Port Authority (KPA), powers conferred by Section 64(3) of the Port Authorities Ordinance. The functions of the KPA include; regulating and controlling the transportation through, into or out of a port of any cargo or goods from any place or vessel to any other place or vessel by any means or modes, including the conveyance of petroleum or gas by pipelines, both onshore or offshore, on land or underground, in water or underwater.
B.	**PORTS OPERATORS**	
1.	**Northport (Malaysia) Bhd**	Northport, is situated in two locations namely in Northport and Southport at Port Klang for handling of conventional cargo and containers which offer special amenities and services for handling different types of cargo
2.	**Westports Malaysia Sdn Bhd.**	Westports is located at Pulau Indah. It a hub for both local and transshipment containers. With current total quay length measuring 4.6 kilometers, which includes 7 container terminals,

NO.	ORGANISATIONS	ROLES, FUNCTIONS AND RESPONSIBILITIES
3.	**Penang Port Sdn Bhd**	Penang Port serves as the main entrance to shipping in the northern states of West Malaysia. Penang Port handle all types of cargo such as container, liquid, dry bulk, break bulk and transhipment.
4.	**Johor Port Berhad.**	Johor Port is a multipurpose port situated at Pasir Gudang, Johor. It has the world largest palm oil terminal facilities and top 5 LME(London Metal Exchange) cargos. The hinterland consist variety of industries in the petrochemical, engineering, furniture, electronics, telecommunications and food products.
5.	**Bintulu Port Sdn Bhd.**	Bintulu Port is located in Bintulu, Sarawak. It is a multipurpose port specializing in handling oil and gas related cargo.
6.	**Sabah Ports Sdn Bhd**	Sabah Port Sdn .Bhd. manages eight(8) ports in Sabah,ie. Kota Kinabalu Port, Sapangar Bay Container Port, Sepangar Bay Oil Terminal, Kudat Port, Tawau Port, Sandakan Port, Lahad Datu Poart and Kunak Port. Besides containers, dry cargo and general cargo, Sabah Port Sdn Bhd. also operates a large number of liquid cargo, particularly palm oil.
7.	**Pelabuhan Tanjung Pelepas Sdn Bhd**	PTP is located at the southwest of Johor in Gelang Patah. PTP has positioned itself as a transshipment hub. In addition to road, sea and air inter-modal linkages, PTP is also connected to the national rail grid passing through Peninsular Malaysia from Singapore to Southern Thailand.
8.	**Kuantan Port Consortium Sdn Bhd**	Kuantan Port Sdn. Bhd. is a multi-purpose port, which is located in Kuantan, in the state of Pahang caters the needs of the petrochemical industry in East Coast of Peninsular Malaysia.
9.	**Tok Bali Supply Base**	TBSB is located at Tok Bali, Bachok Kelantan. It is an offshore oil &gas supply bas. TBSB located on over 200 acres of costal land, zoned for port use.
10.	**Konsortium Pelabuhan Kemaman Sdn. Bhd**	Kemaman Port is a major seaport located at Kemaman, Terengganu. Konsortium Pelabuhan Kemaman Sdn. Bhd. (KPK) operates the terminals of the port of Kemaman namely, the East Wharf and the Liquid Chemical Berth ('LCB') terminals.

NO.	ORGANISATIONS	ROLES, FUNCTIONS AND RESPONSIBILITIES
11.	**Samalaju Industrial Port Sdn. Bhd.**	Samalaju Industrial Port Sdn. Bhd. (SIPSB) is located in Bintulu, Sarawak. SIPSB specializing in dry-bulk cargo operation.
12.	**Lumut Maritime Terminal Sdn. Bhd.**	Lumut Maritime Terminal Sdn Bhd. operates a marine port in Malaysia. It is located in Lumut, Perak. The company offers the transshipment of liquid bulk and dry bulk cargoes. It provides land space for warehousing or transshipment needs; and industrial land for sale.
13.	**Langkawi Port Sdn Bhd**	Langkawi Port Sdn Bhd is located at Langkawi Island, Kedah. The company operates and manages the Port of Tanjung Lembung which is the main cargo port in Langkawi.
14.	**Asian Supply Base (ASB)**	Asian Supply Base Sdn. Bhd. (ASB) is located at Wilayah Persekutuan Labuan. ASB is a fully integrated logistics hub tailored to the requirements of the Oil and Gas exploration, development and production activities in this region.
15.	**Labuan Liberty Port Management Sdn Bhd.**	Labuan Liberty Port Management Sdn Bhd is located off Northwest coast of Borneo, at 05 latitude North and 115 longitude East and lies about 10 km Southeast off the mainland of Sabah. The Labuan Liberty Port is the main port of entry for vessel carrying general cargoes, bulk cargoes and containers in Labuan.
16.	**Pengerang Terminals Sdn Bhd.**	Pengerang Terminals Sdn Bhd. is located in Pengerang, Johor. The terminal has six berths and is able to accommodate very large crude carriers.
17.	**Sungai Udang Port Sdn Bhd.**	Sungai Udang Port Sdn. Bhd operates as a subsidiary of PETRONAS Maritime Services Sdn Bhd.
18.	**Kuala Perlis Jetty**	Kuala Perlis jetty is one of the two major departure points for the Langkawi Island, the other being the Kuala Kedah in Kedah. Kuala Perlis has long been a major port linking Perlis with Langkawi, Penang as well as Phuket Island and other southern coastal Thai towns.
19.	**Tanjung Langsat Port**	Tanjung Langsat Port (TLP) is the third port in Johor, Malaysia, designed to complement the Port of

NO.	ORGANISATIONS	ROLES, FUNCTIONS AND RESPONSIBILITIES
		Tanjung Pelepas and Johor Port in Pasir Gudang. Positioning itself asSoutheast Asia's premier speciality terminal, it handles bulk cargo such as liquefied petroleum gas (LPG) and dangerous chemicals.
20.	**Kontena Nasional (Inland Port)**	Kontena Nasional Berhad (KNB) is Malaysia's premier logistics company with over 44 years of experience in logistics operation. It is one of Malaysia's largest one-stop logistics companies providing comprehensive logistics solutions customised to customer's requirements
21.	**Shell Refining Company (Port Dickson)**	The Company's oil refinery at Port Dickson produces a comprehensive range of petroleum products, most of which are consumed within Malaysia.
C.	**ASSOCIATIONS**	
1.	**International Association of Ports and Harbours (IAPH) (An International Association)**	IAPH is a global alliance of ports, representing 180 ports and 140 port-related businesses in 90 countries. The member ports together handle well over 60% of the world's sea-borne trade and nearly 80% of the world container traffic. It is a non-profit-making and Non-Governmental Organization (NGO) recognized as the only international organization representing the voice of the world Port Services Industry. IAPH is granted Consultative Status as an NGO in the United Nations.
2.	**The ASEAN Ports Association (Malaysian chapter)**	The ASEAN Ports Association (Malaysian chapter) is a forum that coordinates activities and works for the interest of member ports in Malaysia with direct affiliation with the APA. Malaysian Ports comprising of members from both the public and private sectors make up APA Malaysia.
3.	**International Cargo Handling Coordination Association (ICHCA)**	The Cargo Handling Coordination Association (ICHCA) is a membership organization in 1952 dedicated to the promotion of efficiency and economy in the handling and movement of goods, from origin to destination, by all modes, and at all phases of the national & international transportation chain.

2.3 GOVERNMENT LEGISLATION, POLICIES AND INITIATIVES

It is imperative that, this research has to make reference to legislations, by-laws and policies that are directly related to Ports Activities Industry.

i. Legislations

The Acts that are specifically related to port management and operations are as listed below:

- Carriage of Goods by Sea Act 1950
- Merchant Shipping Ordinance 1952
- Light Dues Board Act 1953
- Port Authorities Act 1963
- Ports Privatisation Act 1990
- Penang Port Commission Act 1955
- Bintulu Port Authority Act 1981
- Sarawak Port Authority Ordinance 1961
- Sabah Port Authority Enactment 1967

ii. Eleventh Malaysia Plan (11th MP)

In the Eleventh Malaysia Plan, 2016-2020, the transport and logistics sector will continue to remain a crucial driver of growth.

Under the 11th MP, Strategy A3; Expanding port capacity, access, and operations through the National Port Policy, a port community system, and improving port accessibility and capacity. A single communications platform will promote information sharing among ports and private stakeholders such as logistics firms and customs agents. All port authorities will be required to establish their Port Community System (PCS), an open electronic system that enables intelligent and secure information exchange between public and private stakeholders. PCS optimises, manages, and automates port and logistics processes through a single window for interaction

Accessibility to major ports will be improved to cater for bigger vessels through channel deepening works. In addition, port operators will undertake capacity expansion, which includes building additional berths and wharfs. These

improvements will attract more international liners and mega vessels with capacity of 18,000 TEUs to call at these ports.

As Malaysia integrates further into the ASEAN Economic Community and the global economy on the whole, economic growth through trade and exports will necessitate greater capacity and efficiency of its port infrastructure. To address this, attention will be given to expanding capacity of ports and address issues in congestion.[1]

iii. ETP (Economic Transformation Plan)

Launched on 25 September, 2010, the Economic Transformation Programme (ETP) was formulated as part of Malaysia's National Transformation Programme. Its goal is to elevate the country to developed-nation status by 2020, targeting GNI per capita of US$15,000. The ETP's targets for 2020 will be achieved through the implementation of 12 National Key Economic Areas (NKEAs), representing economic sectors which account for significant contributions to GNI.

With regards to Ports Industry, which is classified under Logistic Infrastructure, will receive particular attention due to their central roles in driving GNI. A substantial additional infrastructure investments are required to support the economic growth that will be delivered through the ETP. Upgrading maritime infrastructure initiatives, which include dredging port channels to cater for bigger vessels and expanding capacity at Westports of Port Klang, Port of Tanjung Pelepas and Penang Port;

iv. The Port Policies

In line with government policy to instill management of the private sector or in various fields owned and state control in this country, the first privatization of a major port facility at Port Klang has been implemented. In 1986 the container terminal operated by LPK (Lembaga Pelabuhan Kelang) was privatized to Klang Container Terminal Bhd. Following the privatization of the remaining facilities, port operations have been privatized to Klang Port Management Sdn Bhd in

[1] http://rmk11.epu.gov.my/book/eng/Chapter-7/Chapter%207.pdf

1992. The newly developed port facilities in Pulau Indah (Pulau Lumut) was privatized to Kelang Multi Terminal Sdn Bhd in 1994.

Through the privatization of facilities operations and services of the port, the Port Klang Authority has enhanced its role as a trade facilitator, regulate and as a landlord . Then the main functions of the board under the modified role are as follows: -

• Facilitate Trade
• Port Planning and Development
• To monitor the privatization of facilities services
• Free Zone Authority
• Property Management

v. Cabotage Policy

Malaysia consists of three federal territories and thirteen states located in Peninsular Malaysia (bordering Thailand) and East Malaysia in the island of Borneo (bordering Brunei and Indonesia). On 1st. January 1980, the Government of Malaysia implemented a national cabotage policy.

The aims of cabotage policy implementation are:

- To transform Malaysia into a maritime nation. The Cabotage Policy is very strategic, as Malaysia has a very long coastline relative to our land mass. In addition, West Malaysia and East Malaysia are separated by more than 1000 km of the South China Sea. Hence, it is an essential a policy tool to promote economic and national integration between the two (2) separate parts of Malaysia.
- To create a maritime industry that can rival the best in the world like those in Europe, Hong Kong and United State of America.
- To create maritime entrepreneurs.
- To carry the Malaysian flag in all oceans and seas in the world.
- To earn foreign exchange for Malaysia.

vi. Port Privatisation

Since in the late 1980s, many national and state-level governments have adopted institutional reforms in the port sector, such as privatization, corporatization, and disintegration of terminal operation functions from the government's hands (World

Bank, 2001). One of the best examples of port privatization is Port Klang which has been privatized to Klang Container Terminal Berhad in 1986. According to *Md Nor* et al.,(2003), the privatisation of Port Klang has led to the improvement of overall port efficiency.

The desire to involve the private sector in the management and provision of port infrastructure and services is prompted by the recognition that government regulations and processes are not always conducive to efficient operations of commercial activities and by recognition of the private sector's relative strength in this field. The attributes of the private sector enable it to respond rapidly to market changes through speedy decision making and investment.

Currently, Malaysia has a total of seven (7) Federal ports namely Port Klang, Johor Port, Port of Tanjung Pelepas, Kuantan Port, Penang Port, Bintulu Port and Kemaman Port. Meanwhile, the ports in Sabah and Sarawak are under the jurisdiction of the State Government of Sabah and Sarawak respectively.
The main terms of port privatization concessions are as follows:

- Land are leased to the operator
- Operation licence
- Operator responsible for the development/ port expansion

vii. Supply Driven Port Infrastructure

To achieve the objective of enhancing the competitiveness and attraction of Malaysian ports, the Government has undertaken the following:

- Ensuring a supply-driven environment by providing ample capacity in ports to mitigate congestion and reduce waiting time.
- Developing services such as feedering and bunkering at local ports, and other ancillary services such as banking, insurance and legal.
- Facilitating supply of adequate facilities to accommodate large vessels and increasingly larger types of ships.
- Creating a commercially competitive environment to provide value-added logistics services and infrastructure to encourage transshipment traffic.
- Creating a conducive environment to attract Main Line Operators such as offering shipping lines to buy into equity of ports.

- Promoting ship financing by setting up financial institutions to assist the maritime community via competitive financing.
- Designating Port Klang as the national load center to serve a hinterland with large cargo base.
- Designating Port of Tanjung Pelepas as a transshipment hub port. In addition to port development, efforts have also been undertaken to facilitate and promote trade.
- Free Zones have been created at ports to simplify documentation processing and procedures for cargo consolidation and to attract value-added services.

viii. Transhipment Hub

Sustained high levels of economic growth have resulted in increasing complexities in the functions and operations of ports, inland transport networks linking ports and the related institutional framework. Malaysia has taken an approach of emphasizing the expansion of capacity to provide a supply-driven environment and upgrading the equipment and facilities of its ports to ensure efficiency. In addition, niche ports have been established in the form of Port Klang as the national load center and Port of Tanjung Pelepas as the transshipment hub, which have aggressively spread their wings to enhance their global connectivity. All these bear testimony to Malaysia's tremendous rise and growing clout as a maritime nation.

ix. Free Zone

A free zone is a designated, secured area in which commercial and industrial activities are carried out and gazetted by the Minister of Finance as stated under section 3(1) Free Zones Act 1990 (Act 438). There are two types of free zone that is the free zone for commercial activities (FCZ) and free zone for industrial activities (FIZ). Customs control at the free zone is at the minimum and basically only at the exit point. Free Zone Authority is appointed by the Minister under section 3(2) Free Zones Act 1990 to administer, maintain and operate the free zone.

Industries in Malaysia are predominantly located in over 500 industrial estates and Free Zones developed throughout the country. These zones are **categorised as export processing zones,** which cater to the requirements of export-oriented

industries. There are also specialised parks that have been developed to cater to the needs of specific industries.[2]

x. Landbridge

The landbridge concept was first conceived in the early 1960s to promote a more efficient means of shipping between East Asia and Europe. It is an intermodal service involving land and sea transport as an alternative to transportation service entirely by sea. Many landbridge services are now operated in the world.

The Malaysia-Thailand Landbridge was launched in 1999. It uses KTMB services for the Malaysian part and the State Railway of Thailand (SRT) services for the Thai part of the journey. The landbridge service offers intermodal transportation between the Klang Container Terminal, Port Klang or Kontena Nasional Inland Clearance Depot at Seri Setia in Malaysia to Bangsue and Lat Krabang in Thailand. In addition to transshipment service, it facilitates direct export and import of goods from Klang Valley to Bangkok and vice versa. The landbridge service also offers transshipment of containers for a third country by transporting the containers from a Malaysian port.[3]

xi. National Single Window

A National Single Window (NSW) is defined as a facility that allows parties involved in trade and transport to lodge standardised information and documents with a single entry point to fulfil all import, export and transit-related regulatory requirements. If information is electronic, then individual data elements should only be entered once.

Malaysia's NSW is an electronic approach to facilitate trade and increase efficiency of the Government delivery service. There are five elements of NSW services identified for the 1st Phase of NSW Implementation. MITI (Ministry of International Trade and Industry) has been selected as the Lead Agency for implementation of NSW. These services cover; E- Declare , E-Permit, Electronic Funds Transfer (EFT), E-Preferential Certificate of Origin and E-Manifest.[4]

[2] http://gst.customs.gov.my/en/rg/SiteAssets/specific_guides_pdf/FREE_COMMERCIAL_ZONE_05012016.pdf
[3] http://www.unescap.org/sites/default/files/bulletin77_Article-6.pdf
[4] https://en.wikipedia.org/wiki/Single-window_system

xii. Electronic Data Interchange (EDI)

Malaysia has initiated several studies to formulate a strategic and operational plan for implementing EDI to expedite cargo clearance and trade facilitation in the Klang Valley Region. The Port Klang Community System was implemented in phases, beginning with the submission of customs import and export declaration forms involving Customs and the forwarding agents. An electronic payment system was implemented to support Customs duty payments electronically.

2.4 INDUSTRY AND MARKET INTELLIGENCE

Industry intelligence is the collection and distribution of data of an industry by using a variety of approaches. The industry will be able to utilise this information to make business decisions, manpower developments and training requirements. Industry intelligence is critical for developing strategies in the areas of manpower development and the impact of those developments.

The tremendous growth of ports and shipping activities in Malaysia over the years underlines the value of the maritime sector to its economic well-being and the importance of the seas to the lives of its people. Ports and shipping are recognized as essential contributors in facilitating Malaysia's trade, hence crucial to its economic prosperity. Given this, it is appropriate that Malaysia, a nation surrounded by a sea area much larger than its land mass, is acknowledged as a leading maritime nation.

The phenomenal growth in global trade has had a huge impact in the development of the ports and shipping in Malaysia. In Malaysia, this has spurred investment and development of various infrastructures to support the explosion in its increasing trade with the world's nations. The development of maritime infrastructure especially has benefited tremendously from this trade and investment boom. This is underlined by the estimation that 95% of Malaysia's international trade, the lifeblood of its economy, is being carried through the oceans via its international seaports.

i. Global outlook of the industry

Over than 90% of Malaysia's international trade are transported by sea. According to MITI (Ministry of International Trade and Industry), in 2015, Malaysia's trade with China expanded by 11.1% to RM230.89 Billion (USD55.67 Billion).

Export to China recorded a double digit growth of 10 percent to RM101.53 Billion. Higher exports were registered for manufactured goods which saw an increase of 10.2 percent. China has been Malaysia's largest trading partner since 2009, and Malaysia is China's largest trading partner among the 10 member Association of Southeast Asian Nations (ASEAN).[5] There are a number of emerging ports in this part of the world, such as, Vietnam, India and Sri Lanka.

ii. International economic initiatives with Malaysian participation

(a) International Maritime Organization (IMO) membership

Malaysia joined the International Maritime Organization (IMO), the United Nations Agency concerned with the safety of shipping and cleaner oceans, as a Member State in 1971 and as a Council since 2014. This marked Malaysia's engagement in cooperation with other nations in the field of regulation and practices relating to technical matters affecting shipping. Through its IMO membership, Malaysia also became engaged in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships. It has ratified several regulations governing shipping such as the International Convention for the Safety of Life at Sea (SOLAS), United Nations Convention on Law of the Sea (UNCLOS) and more recently the International Ship and Port Facility Security (ISPS) code. The ratification of such regulations underlines Malaysia's seriousness in complying with international shipping rules in its efforts to become a maritime nation of global stature.

(b) National Port Strategy assisted by the World Bank

The World Bank is assisting Malaysia to develop a national port strategy to better position the ports industry sector as a critical facilitator of economic growth. According to the World Bank, the primary aim of the study is to define the role of government in planning, regulating, managing and empowering the ports sector as a driver of economic development as well as economic activity in its own right

As well as reviewing Malaysia's position in global and regional container shipping, the study will provide an assessment of challenges facing the country's core container ports of Port Klang, Port of Tanjung Pelepas, Penang Port, Johor Port, Kuantan Port, Sepanggar Port, and Kuching Port. It will also investigate issues

[5] news.xinhuanet.com/english/2016-02/05/c_135078498.htm

such as inter-port competition and the high cost-to-serve in the containerized trades of East Malaysia and identify whether opportunities exist for rationalization of port operations in Sabah and Sarawak. A set of national-level key performance indicators for the ports sector is being developed as well as a roadmap for the adoption and implementation of the new national ports strategy.

(c) Trans-Pacific Partnership Agreement TPPA

The Trans-Pacific Partnership Agreement (TPPA) presently involves 12 prospective member countries in the Pacific Rim. They are Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States (US), and Vietnam. The 12 countries collectively accounted for about 40% of the global economy, with a cumulative gross domestic product (GDP) of almost USD30 trillion, and a population of more than 800 million, as of 2014. The TPPA will provide Malaysia with market access to 4 trading partners that Malaysia presently has no free trade agreements (FTA) with; namely Canada, Mexico, Peru and the US. These 4 countries accounted for about 74% of the market size of the TPPA economic bloc, with a GDP of about USD21 trillion as of 2014.[6]

(d) ASEAN Free Trade Area (AFTA)

The ASEAN Free Trade Area (AFTA)is a trade bloc agreement by the Association of Southeast Asian Nations supporting local manufacturing in all ASEAN countries. ASEAN had six members, namely, Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand. Vietnam joined in 1995, Laos and Myanmar in 1997 and Cambodia in 1999. AFTA now comprises the ten countries of ASEAN. All the four latecomers were required to sign the AFTA agreement to join ASEAN, but were given longer time frames in which to meet AFTA's tariff reduction obligations. The primary goals of AFTA is to increase ASEAN's competitive edge as a production base in the world market through the elimination, within ASEAN, of tariffs and non-tariff barriers and attract more foreign direct investment to ASEAN.

[6] http://fta.miti.gov.my/miti-fta/resources/TPPA_PwC_CBA_-_Final_Report_021215_FINAL_(corrected).pdf

(e) ASEAN Single Window (ASW)

The ASEAN Single Window (ASW) is a unique regional initiative that connects and integrates National Single Windows (NSWs) of Member States. The ASW objective is to expedite cargo clearance within the context of increased economic integration in ASEAN. ASW implementation ensures compatibility of Member States NSWs with international open communication standards while also ensuring that each of those Member States can then exchange data securely and reliably with any trading partners that use international open standards. Simpler and faster processing time, and a more transparent way of doing business – these are the main goals of the ASEAN Single Window initiative.

(f) Container Security Initiative (CSI)

The Container Security Initiative (CSI) was launched in 2002 by the U.S. Bureau of Customs and Border Protection (CBP), an agency of the Department of Homeland Security. Its purpose was to increase security for container cargo shipped to the United States.

(g) Customs-Trade Partnership Against Terrorism (C-TPAT)

The Customs-Trade Partnership against Terrorism (C-TPAT) is a voluntary supply chain security program led by U.S. Customs and Border Protection (CBP) and focused on improving the security of private companies' supply chains with respect to terrorism. The program was launched in November 2001 with seven initial participants, all large U.S. companies. As of December 1, 2014, the program has 10,854 members. The 4,315 importers in the program account for approximately 54% of the value of all merchandise imported into the U.S.[7]

iii. Challenges faced by the Port Services Industry in Malaysia

a) Regional competitors

Competition is rising among Malaysia's container ports and also between them and other container ports in the region to attract users. The performance of container ports is usually indicated by their ability to handle ships and cargos in a cost competitive way. In this regard, container ports must always improve their performance and overall competitiveness to retain clients and attract new users

[7] "C-TPAT Achievements" (PDF). U.S. Customs and Border Protection. 1 December 2014. Retrieved 17 December 2014.

and investments. Regional competitors include Singapore, India, Sri Lanka and Vietnam.

b) Heavy Investment (Capital)

Since late 1980s, when the new trend of larger container ships became apparent, the number of ports with deeper draft has been growing steadily. The need for automated stevedoring and increased demand for cargo handling in port areas are two reasons for this continuous increase in port size. Growth in ship width and container volume has forced ports to replace their cranes with bigger ones. The trend toward larger containerships also makes it more difficult to choose between hub port and feeder port strategies. This trend is driven by the continued growth in container shipping and increased deployment of mega-ships on major trade routes. The time-sensitive operating practices of such mega-ships mean that they require full loading capacity so that they can efficiently call at major hub ports with minimal turnaround time. For ports to successfully meet the challenges stemming from bigger vessels, they must invest a great deal in the improvement of terminal facilities and landside intermodal access.[8]

[8] http://www.unescap.org/sites/default/files/pub_2194_ch2.pdf

2.5 OCCUPATIONAL STRUCTURE OVERVIEW

The occupational structure overview includes a brief description on each sector/subsector of the Port Services Industry.

The Malaysia Standard Industry Classification (MSIC) was used as the main reference for the classification of sector/subsector. In the MSIC 2008, Port falls under Section H and Division 52 as listed below for the Port Services Industry:-

▪ **Section**	**:H**	**Transportation and Storage**
▪ **Division**	**:52**	**Warehousing and support activities for transportation**
		This division includes warehousing and support activities for transportation, such as operating of transport infrastructure the activities of transport agencies and cargo handling
▪ **Group**	**:522**	**Support activities for transportation**
▪ **Class**	**:5222**	**Service activities incidental to water transportation**
▪ **Item**	:52221	Port, harbours and piers operation services
	52222	Vessel salvage and refloating services
	52229	Other service activities incidental to water Transportation
▪ **Class**	**:5224**	**Cargo handling**
▪ **Item**	:52241	Stevedoring services
	52249	Other cargo handling activities

The DSD has developed 22 NOSS for the Port Services Industry up until the year 2015 which can be found under the Transportation section and the Defences and Security Services of the NOSS Registry. The existing NOSS are as in Table 2.2.

Table 2.2 : Summary of NOSS developed under the Port Services Industry

Sector/Level	Level 5	Level 4	Level 3	Level 2	Level 1
Port Security	Seaport Security Management	Seaport Security Control	Seaport Security Surveillance	Not Available	Not Available
Port Security	Maritime Surveillance System Installation & Maintenance Management	Maritime Surveillance System Installation & Maintenance Coordination	Maritime Surveillance System Installation & Maintenance Supervision	Maritime Surveillance System Installation & Maintenance	Not Available
Bunkering Service	Not Available	Not Available	Bunker Operation	Bunker Operation	Bunker Operation
Port Operation	Not Available	Not Available	Port Supervisor	Port Operation Assistant	Port Stevedore
Harbour Tug Boat Crew	Not Available	Not Available	Harbour Tug Boat Operation	Not Available	Not Available
Port Vessel Traffic Information System	Not Available	Not Available	Vessel Traffic Information System (VTIS) Operation (Port)	Not Available	Not Available
Cargo Shipment Support Services	Cargo Operation Management	Cargo Operation Management	Cargo Operation Services	Not Available	Not Available
Cargo Handling Services	Not Available	Not Available	Port Operation Planning	Not Available	Not Available
Port Crane Operation	Not Available	Not Available	Port Equipment Container Operation	Not Available	Not Available
Port Maintenance	Port Equipment Maintenance Management	Port Equipment Maintenance Management	Not Available	Not Available	Not Available

(Source: NOSS Registry February 2016)

2.6 CHAPTER CONCLUSION

It can be summarised in this chapter that the Malaysian Port Services Industry has great potential at a global scale. Malaysia has many advantages and features that can be leveraged upon to make it internationally competitive with skilled workforce, current technology and infrastructure. Backed up with support and development by the government and the industry players, promises a progressive future for the Port Services Industry in Malaysia.

CHAPTER 3: METHODOLOGY

3.1 CHAPTER INTRODUCTION

This chapter describes the methodology of the overall Occupational Framework process that was conducted throughout the Port Services industry Occupational Framework analysis.

3.2 RESEARCH METHODOLOGY

Qualitative analysis was selected as the main method of obtaining input throughout this study. Qualitative research investigates the why and how of decision making, not just what, where, when. Hence, smaller but focused samples are more often used than large samples. It focuses on unique themes that illustrate the range of the meanings of the subject matter rather than the statistical significance of the occurrence. This process uses inductive reasoning, by which themes and categories emerge from the data through the researcher's careful examination and constant comparison. Qualitative research typically rely on the following methods for gathering information: Participant Observation, Non-participant Observation, Field Notes, Structured Interview, Semi-structured Interview, Unstructured Interview, and Analysis of documents and materials. A combination of these methods is applied in this study such as semi-structured interviews, participant observation, and discussion workshops.

Below are the methods used throughout the research conducted on the Port Services industry:

Step 1: Preliminary Info Gathering

Preliminary information gathering was done via literature review/research and survey/questionnaires.

(i) Literature Review

A literature review on the Port Services industry was carried out to get some insight of this industry in the context of the Malaysian scenario. The scope covered under this search includes definitions, current analysis of the sub-sectors/areas, current status of the Port Services industry, skilled workers requirement in the local sub-sector and the industrial competition at

international level. A Focus Group, comprises of SME (Subject Matter Experts) were selected from the industry to provide the relevant information for the items mentioned above.

The literature review was then presented to industry members to confirm the accuracy and relevancy to the industry.

(ii) Semi-Structured Surveys

Semi-structured surveys also served as a source of information, please refer to Annex 3: Questionnaire. The survey was used as the instrument to confirm the findings obtained though qualitative analysis obtained in the workshop sessions. The respondents consisted of representatives from the organization/agencies relevant to the sub-sectors of the Port Services industry.

The questionnaire was developed by referring the findings from the workshops with industry panel members. The sub-sectors, areas, job titles and skill sets were adapted to become guiding questions in the questionnaire.

The questionnaire consisted of various questions that are semi-structured and respondents from the industry were asked about the industry workforce.

Step 2 : Engaging Industrial Experts

Industry experts were engaged by applying various mediums such as brainstorming, focus group, interview, on-site visit, emails etc.

Experts from the Port Services industry were identified for further communication and contact. The lists of experts were included in the list of development panel members in Annex 2; List of Contributors. In the process of gathering the input, DACUM brainstorming technique was adopted and were attended by development panel members who discussed the different sub-sectors and areas. Facts obtained during the literature review were also discussed and presented to the development panel members. The information gathered was then used as input to the Occupational Framework of the said sub-sector.

Workshops and interviews were conducted during the development of the Port Services Industry Occupational Framework. Follow up discussions with the

expert panel members were done in smaller groups to verify the findings of the Occupational Framework. The details of the workshops are as listed below:

Table 3.1: List of Occupational Framework Development session

Date	Venue	Activity
7th – 8th May 2016	IBIS Styles Cheras Hotel, Kuala Lumpur	• Confirmation of Preliminary Literature Search • Development of Questionnaire • Identification of Occupational Structure (Preliminary)
19th May 2016	Port Klang	• Development of Occupational Structure • Site Visit • Industry Engagement
8th – 9th August 2016	IBIS Styles Cheras Hotel, Kuala Lumpur	• Development of Occupational Structure • Development of Occupational Description

Step 3 : Data Analysis

Based on the activities conducted above, substantial data and information were collected. The data and information were discussed and analysed in development workshops, focus group discussions and interviews attended by selected key persons or experts from the public and private sub-sector. The presence of the key persons or experts ensured that the development of the Occupational Framework was current and relevant.

Throughout the development process, the Port Services industry was analysed using the above methodology to identify the following:

(a) Scope of the Industry and its sub-sectors ;
(b) Occupational groups of the sub-sector;
(c) Job titles;
(d) Skills in Demand;
(e) Hierarchy structure (Level 1 – 8); and
(f) Occupational Description.

Step 4 : Occupational Structure (OS) Development

The Occupational Structure development technique is explained in detail in section, 3.2.1, Occupational Structure Development.

Several elements were referred when developing the Occupational Structure (OS) such as the following:

- Identification of sub-sector/area/sub-areas (MSIC)
- Identification of Job Title (Organization Structure etc)
- Identification of levelling based on MOSQF

Step 5 : Job Description Development

The Job Description development technique was explained in detail in section 3.2.2, Occupational Description Development. The Job Description shall reflect the competencies performed for a particular job.

Step 6 : Finalizing OA Document

The collated documents were finalised and presented in the format as prescribed by the Department of Skills Development.

3.2.1 Occupational Structure Development

The Occupational Structure was developed based on the following processes:

(a) Identification of industry scope and boundaries with other industries

The identification of the industry scope is important so that when identifying the relevant sub-sectors and areas under the industry, it will define the segmentation of the particular industry to other relevant industries. This will eliminate the possibility of duplication between common areas. The rule of thumb is to avoid taking into account the organization chart as this will include many other industries such as marketing, administration, human resources and public relations. These areas are common across various industries and have a different set of skill sets. Grouping based on similar skill sets in terms of technical abilities is a determining factor. The MSIC and existing Occupational Structures in the DSD NOSS Registry were also used as a point of reference.

(b) Identification of sub-sector/area/sub-area

The coverage of a sub-sector should be able to accommodate a number of areas and sub-areas where applicable. Sub-sectors are identified as being components of an industry and can be clustered in terms of classification, segmentation or process driven.

(c) Identification of job titles

In order to identify job titles, it was important to obtain consensus from expert panel members that the job title is common between organizations either Small, Medium or Enterprise (SME) and is easily accepted by practitioners in the industry.

(d) Leveling of job titles

Leveling of a job title was done based on the level of competency required to be deemed competent at a specific designation. The level descriptors in Annex 1 are used a reference when determining the different levels relevant to a specific job title.

3.2.2 Occupational Description Development

The Occupational Description (OD) is the detailed description of the main job scope of the job title. The OD is developed using a combination of brainstorming sessions with panel members and then the Occupational Descriptions would be compared to other available descriptions for the same job title. Below are the main steps in producing an OD for the respective job titles:

(i) determine the main areas and sub-areas in the sub-sector;

(ii) identify the job titles; and

(iii) identify the job scope.

To describe the Occupational Description clearly, the statement must consist of a ***Verb, Object*** and ***Qualifier***. The rationale of determining the description attributes is to facilitate NOSS development especially in job and competency analysis.

a) Object

The object is determined first before the verb and qualifier. It is the main determinant to distinguish one job to another. The objects are acquired from the industrial experts during a brainstorming session and written on DACUM cards so that all the experts can see the objects identified. Objects of those in the related sub-sector or area are determined as in the example below:

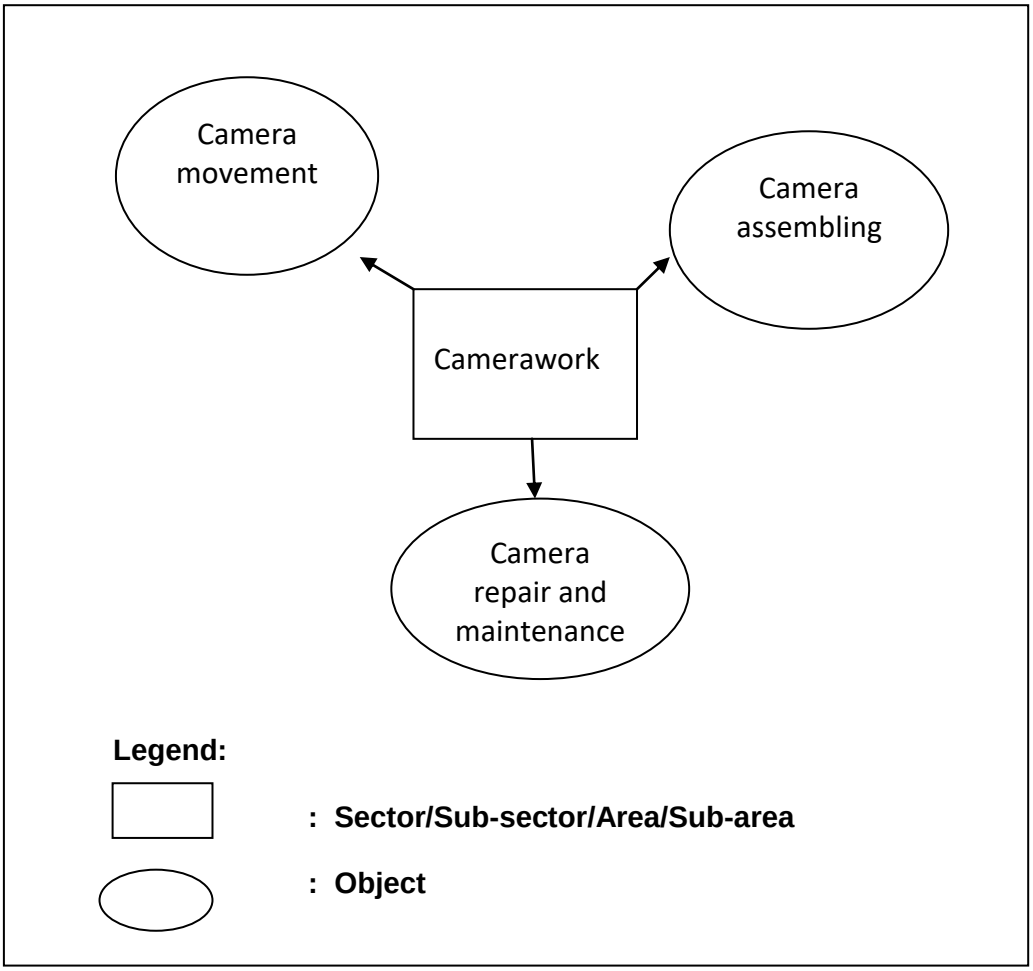

Figure 3.1: Example of Identifying Objects

b) Verb

The verb is then determined based on the level of difficulty of the identified job titles, such as below:

- ***Object*** *:camera movement*
- ***Verb for Level 3 : Carry Out***
- ***Verb for Level 4 : Coordinate***

➢ ***Verb for Level 5 : Direct***

Hence, the contents of the job definitions will be as below:

- Director of Photography (Level 5)
- ✓ ***Direct*** *camera movement + (qualifier)*
- Cameraman (Level 4)
- ✓ ***Coordinate*** *camera movement + (qualifier)*
- Assistant Cameraman (Level 3)
- ✓ ***Carry out*** *camera movement + (qualifier)*

c) Qualifier

Based on the example above, the statement is not clear as there is no qualifier for the object, therefore a qualifier must be added to further clarify it. Below is an example:

➢ ***Coordinate*** *camera movement during* ***film production***

3.3 CHAPTER CONCLUSION

This chapter has elaborated on the methodology used in the study which is through literature review and DACUM brainstorming sessions. The results of the Occupational Structure and Occupational Description development and skills in-demand identified by focus group and industry surveys are presented in the next chapter, Chapter 4, Findings.

CHAPTER 4: FINDINGS

4.1 CHAPTER INTRODUCTION

The identified sub-sectors for the Port Services Industry were obtained through discussions with industry experts during the development workshop sessions and interviews. Based on the discussions held during development workshops, the development panel members had identified that the Port Services industry in Malaysia was categorized into 4 sub-sectors which are:-

a) Marine Services
b) Warehousing
c) Cargo Handling
d) Ancillary Services

Research instruments used were focus group discussions, semi-structured surveys, interviews. Information was initially obtained from available material. This information was then analysed and used as the basis for the initial working group workshops. During the initial working group workshops, the information was analysed and grouped into three key theme areas which were:

- Industry Background
- Occupational Structure
- Skills in Demand

These key theme areas were then used as a guide and checklist to obtain information through focus group discussions with relevant stakeholders in Malaysia. The feedback and input obtained from the focus group discussions were then analysed to determine the current industry scenario in Malaysia.

In order to obtain information on skills in demand and industry intelligence, semi-structured surveys were distributed to the respondents who were representatives of the relevant organisations. The input acquired from the meetings, interviews and survey responses were then reviewed.

4.2 COMPARATIVE STUDY ANALYSIS

This section consists of the outcome of comparing the existing Occupational Analysis (OA), NOSS and other relevant industry frameworks in other countries.

4.2.1 International Comparisons

(a) Port Services Industry Occupational Framework in Singapore

The Port Service Workforce Skills Qualification (PS WSQ) competency framework, which was developed by the Singapore Workforce Development Agency (WDA) and the Port Services Industry, defines the competencies needed for various port related job roles. The Singapore WSQ for Port Services had highlighted areas for skills training under the Lashing and Mobile Equipment Operations. Therefore, the WDA has developed certifications in these areas. The framework facilitates the skills development and career progression of port employees and professionals through competency-based training and by acquiring nationally recognised certification.[9]

(b) Port Services Industry Skills Training in Australia

The Australian Maritime and Ports sector had recently faced a declining skills base for decades. Its workforce is one of the oldest in the Australia and few ship-based training berths were available for new entrants. There had also been a mismatch between the skills supply produced by established training institutions and industry demands. Given the strong international competition for skilled port workers where regional and remote ports faced difficulties in recruitment, the occupations of Marine Engineer and Deck Hand/Integrated Rating were in shortage. Subsequently, the Australian Transport and Logistics Industry Skills Council had administered the development of the Transport and Logistics Industry Skills Council Training Packages in Transport and Logistics. Currently available qualifications include those in Warehousing, Stevedoring, Waste Driving and Logistics.

[9] Singapore Workforce Development Agency. Singapore Workforce Skills Qualifications. Port Services. http://www.wda.gov.sg/content/wdawebsite/L207-AboutWSQ/L301-WSQIndustryFramework-PortServices.html

4.2.2 Comparison of previous NOSS related to Port Services Industry

Previous NOSS developed by the Department of Skills Development that are relevant to sub-sectors in the Port Services Industry Occupational Structure are listed below:

- Seaport Security Surveillance
- Maritime Surveillance System Installation & Maintenance Supervision
- Bunker Operation
- Port Supervision
- Harbour Tug Boat Operation
- Vessel Traffic Information System (VTIS) Operation (Port)
- Cargo Operation Services
- Port Equipment Maintenance Management Port Equipment Container Operation
- Port Operation Planning
- Stevedoring

The Table 4.1 shows the existing NOSS against the sectors identified under the Port Services Industry. This will serve as reference as to whether the development of the NOSS is required when compared against the critical job or skills in demand.

Table 4.1: Port Services Industry sub-sectors/job area against Existing OA and NOSS

No.	PORTS SERVICES INDUSTRY OCCUPATIONAL STRUCTURE		EXISTING NOSS									
	SUB-SECTOR	JOB AREA	Seaport Security Surveillance	Maritime Surveillance System Installation & Maintenance	Bunker Operation	Port Supervision	Harbour Tug Boat Operation	Vessel Traffic Information System (VTIS) Operation (Port)	Cargo Operation Services	Port Operation Planning	Port Equipment Container Operation	Port Equipment Maintenance Management
1	Marine Services	Navigational Support		X								
		Pilotage										
		Towage					X					
		Mooring										
2	Warehousing	Storage										
		Distribution & Consolidation										
		Packaging										

No.	PORTS SERVICES INDUSTRY OCCUPATIONAL STRUCTURE		EXISTING NOSS									
	SUB-SECTOR	JOB AREA	Seaport Security Surveillance	Maritime Surveillance System Installation & Maintenance	Bunker Operation	Port Supervision	Harbour Tug Boat Operation	Vessel Traffic Information System (VTIS) Operation (Port)	Cargo Operation Services	Port Operation Planning	Port Equipment Container Operation	Port Equipment Maintenance Management
3	Cargo Handling	Cruise / Passenger							X			
		Containerised							X		X	
		Non-Containerised							X		X	
4	Ancillary Services	Stevedoring										
		Bunkering			X							
		Waste Disposal										
		Ship Chandling										

4.3 SURVEY ANALYSIS

Based on the main key themes, a semi-structured survey was formulated to address each of the areas of discussion that will ultimately lead to the objective of the project. The survey comprised of 9 questions which were divided into 2 sections revolving the key themes identified during the focus group discussion. A sample of the survey questions is included in this report in Annex 3.

The semi-structured survey was provided to a total of 20 respondents representing various stakeholders. Generally during each meeting the main topics of discussion revolved around the topics in the questionnaire. Most workshop discussions consisted of a more collective discussion of pertaining issues. Material and samples of relevant documentation were provided for further comprehension during the meetings whereas web links and material were emailed to the researcher by the corresponding organisations. The findings of the survey are elaborated in the following sections.

4.4 OCCUPATIONAL STRUCTURE

The identified sub-sectors for the Port Services Industry were obtained through literature research and discussions with industry experts during the development workshop sessions and interviews.

The Occupational Structure for Port Services Industry is included in Annex 4. Table 4.2 shows the summary of job titles according to sub-sectors and areas.

Table 4.2: Summary of Job Titles

No	SUB-SECTOR	JOB AREA	LEVEL					NUMBER OF JOB TITLES IDENTIFIED
			1	2	3	4	5	
1	Marine Services	Navigational Support	-	1	1	-	-	9
		Pilotage	-	-	-	1	1	
		Towage	1	1	1	-	-	
		Mooring		1	1	-	-	
2	Warehousing	Storage	1	1	1	1	1	9
		Consolidation & Distribution		1	1			
		Packaging		1	1			
3	Cargo Handling	Cruise / Passenger	1	1	1	1	1	8
		Containerised						
		Non-Containerised						
		Stevedoring		2	1			
4	Ancillary Services	Bunkering	1	1	1	-	-	11
		Waste Disposal	1	1	-	-	-	
		Ship Chandling	1	1	1	-	-	
		Lashing	1	1	1	-	-	
TOTAL NO. OF JOB TITLES IDENTIFIED			7	13	11	3	3	37`

With reference to Table 4.2, a brief description of each sub sector is described below.

4.4.1 MARINE SERVICES

This sub-sector includes the various types of Marine Services which include Navigational Support, Pilotage, Towage and Mooring. The entry level is for navigational support is at Level 2 as an Assistant Controller. For the Pilotage sub-sector, the entry level is at level 4 as a Pilot and they may progress as Pilot Superintendent at level 5. Both the Towage and Mooring starts at level 1 as Boat crew. For Towage, the workers may progress to become an Assistant Tug Master then at level 3 as a Tug Master. The workers under Mooring will be responsible as a Helmsman at level 2 and progress as a Mooring Supervisor at level 3.

4.4.2 WAREHOUSING

This sector includes four sub-sectors which are Storage, Distribution & Consolidation (C&D) and Packaging.

The entry level for all 3 sub-sectors is at level 1 as Cargo/Equipment Handler and then will progress to level 2 as Assistants and to level 3 as a Supervisor according to their respective areas. At level 4 the personnel will be responsible as Warehousing Executives and at level 5 as Warehousing Managers.

4.4.3 CARGO HANDLING

Cargo Handling consists of Cruise/Passenger, Containerised, Non-containerised and Stevedoring.

The entry level for all 4 sub-sectors at level 1 is as a Cargo Handler and at level 2 for Cruise / Passenger, Containerised, Non-containerised is as an Equipment Operator and at level 3 as an Operation Supervisor. For Stevedoring, at level 2 are at the Winchman and Signalman and at level 3 as a Stevedore Supervisor. The job title at level 4 for all the 4 sub-sectors are as an Assistant Operation Manager and at level 5 as an Operation Manager.

4.4.4 ANCILLARY SERVICES

The sub-sectors include Bunkering, Waste Disposal, Ship Chandling and Lashing. The entry level is at level 1 for Bunkering and Waste Disposal is as a Rigger, at level 2 they may progress as a Pumpman for Bunkering and Bunkering Services Supervisor at level 3. Under Waste Disposal the highest is as an Equipment operator which is at level 3. The entry level is at level 1 as a Cargo Handler, Equipment Operator at level 2 and at level 3 is as a Chandling Supervisor. At level 1 the job title is as a Lasher, at level 2 as a Lashing Foreman and at level 3 as a Lasher Supervisor.

4.5 OCCUPATIONAL DESCRIPTION

The Occupational Description describes the occupations under the Occupational Structure in terms of competencies and duties that they are designated to carry out as competent personnel. These Occupational Descriptions can be used as reference for employees, employers, practitioners, trainers and academicians alike. The Occupational Descriptions in this chapter are organised according to sub-sector, area and hierarchy of levels. Please refer the details of these Occupational Descriptions in Annex 5 of this report.

4.6 SKILLS IN DEMAND

This section highlighted the skills in demand which is a requirement for skilled personnel requirement in the Port Services industry. Job titles under this category reflect the immediate industry requirement for skilled workers. The identification of critical job titles is the essence of developing the Occupational Standard for the job so that formal training can be carried out and skilled workers can be produced and supplied to the industry. Other job titles that are not listed skills in demand are considered sufficient. Findings for this section which are shown in Table 4.3, were obtained via qualitative analysis during discussions with focus group and through survey respondents.

Table 4.3: Skills in Demand

SKILLS IN DEMAND	RATIONALE, CHALLENGES AND ISSUES	POTENTIAL STRATEGIES AND PROPOSED SOLUTIONS
1. SHORTAGES OF WORKFORCE		
Pilot	Currently the career development in Malaysia is limited with lower wage compared to other countries. Most of the workforce is not on permanent basis. The pilot position is not consistently provided by each port.	Increase wages and provide more promising career development.
Tug Master	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce
Boat Crew	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce
Helmsman	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce
Storage Assistant	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce

SKILLS IN DEMAND	RATIONALE, CHALLENGES AND ISSUES	POTENTIAL STRATEGIES AND PROPOSED SOLUTIONS
Consolidation & Distribution Assistant	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce
Cargo /Equipment Handler	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce
Cargo Handler /Stevedore	Most of the workforce are foreigners therefore the labour market is competitive in terms of salary scale between local and foreign workers	Increase wages and provide more promising career development. Provide skills training to potential workforce or up-skilling for existing workforce
2. TECHNICAL SKILLS		
Information Technology (IT) and Human Resource (HR) skills	Most common skills required by executive and managerial level	Include required skills in training
Storage stacking skills	Storage personnel require IT skills in order to perform stacking	Include required skills in training
Technical judgement	Technical judgement skills are important for the equipment operator	Include required skills in training
Safety training	Most critical for Lashing foreman, Cargo handler /rigger, Equipment operator and Chandling supervisor	Include required skills in training
Communication Skills	Very important when communicating with ship crew	Include required skills in training
Skills in interpreting the International Code for the Construction and Equipment of Ships	Required by personnel involved in cargo handling	Include required skills in training

SKILLS IN DEMAND	RATIONALE, CHALLENGES AND ISSUES	POTENTIAL STRATEGIES AND PROPOSED SOLUTIONS
3. EMERGING SKILL NEEDS		
Navigational skills and utilise VTMS (Vessel Traffic Mgmt System)	Skills required by the Controller	Include required skills in training
Helmsman skills	Cost of Helmsman course	Include required skills in training
Green Technology Skills	Sustainability is required by all areas	Include required skills in training

4.7 CHAPTER CONCLUSION

Based on this chapter, the sub-sectors that have been identified reflected the sub-sectors in the Port Services Industry. The visual representations of the Occupational Structures will enable the industry to be interpreted at a glance in terms of levels of competency and available career paths.

The Occupational Descriptions are elaborated in Annex 5 of this report, which outline the responsibilities of a particular job. The skills in demand identified via the surveys and working groups can assist the industry in identifying the rationale and challenges plus the proposed strategies to overcome skills shortage in the industry.

CHAPTER 5:
DISCUSSION, RECOMMENDATION & CONCLUSION

This chapter elaborates the conclusion obtained based on the synthesis of findings. This will be followed by the recommendations as put forth by the researcher based on input throughout the development of this Occupational Analysis.

5.1 DISCUSSION

This section will highlight the critical job titles which reflect skilled personnel requirement in the Port Services Industry. Job titles under this category reflect the immediate industry requirement for skilled workers.

The identification of critical job titles is the essence of developing the Occupational Standard for the job so that formal training can be carried out and skilled workers can be produced and supplied to the industry. It must be highlighted that, other job titles are not considered as critical because the current number of personnel under these categories are sufficient.

Table 5.1 shows the critical job titles in the Port Services industry, where most of these critical job titles are in the Marine Services, Warehousing and Cargo Handling sub-sectors at Operation level (Level 1-3).

The critical job titles are defined based on the following scenarios in order of importance:

a) Shortages of skilled workers supply in the industry
b) Shortages of workers for a particular job area in the industry
c) Strategic assessment in terms of direction for both short term and long term periods

Table 5.1: List of Critical Job Titles

Item	Critical Job Title	Sub-Sector	Job area	Level
1	Pilot	Marine Services	Pilotage Services	4
2	Tug Master	Marine Services	Towage	3
3	Boat Crew	Marine Services	Towage/Mooring	1
4	Helmsman	Marine Services	Mooring	2
5	Storage Assistant	Warehousing	Storage	2
6	Consolidation & Distribution Assistant	Warehousing	Consolidation & Distribution	2
7	Cargo /Equipment Handler	Warehousing	Consolidation & Distribution/Storage/ Packaging	1
8	Cargo Handler /Stevedore	Cargo Handling	Cruise/Passenger/ Containerised/ Non-Containerised/ Stevedoring	1

5.2 RECOMMENDATION

In line with Malaysia's economic plans for the coming years, an occupational Framework of the Port Services Industry has been identified. It is hoped that the result of this Occupational Framework will be used as reference to fulfill the future plans of developing skilled personnel and certifying Malaysians in this industry towards improving the quality of the local industry and thus boosting Malaysia's global competitiveness.

There are several options when addressing or mitigating workforce demand and supply. It may include establishing and maintaining partnerships with other agencies or departments, or educational institutions to increase external talent pools and also through the training of existing staff in line with new skills requirements.

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

i) To continue and streamline efforts in NOSS development for areas under the Port Services Industry in line with the findings of this analysis. This includes the development of the NOSS for the sectors and sub-sectors that are in demand and have not been developed.

The list of areas recommended for NOSS development are such as:

- Marine Services (Pilot, Tug Master, Helmsman and Boat Crew)
- Warehousing (Storage Assistant , Cargo /Equipment Handler and Consolidation/Distribution Assistant)
- Cargo Handling (Cargo Handler/Stevedore)

ii) To encourage apprenticeship (National Dual Training System –NDTS) training in the industry to be run for the areas identified suitable.

iii) Promote certification of existing and experienced personnel in the industry through Accreditation via Prior Learning (*Pengiktirafan Pencapaian Terdahulu* – PPT).

5.3 CONCLUSION

The conclusion is based on the specified objectives of the Occupational Framework as elaborated below:

Objective 1: Occupational Structure

As a result of the Port Services Industry Occupational Framework conducted together with expert panel members from various organizations, a total of 4 main sub-sectors and 36 job titles have been identified. A total of 8 critical job titles were identified in the focus group workshops sessions and through survey findings.

By planning and conducting the training and certification of Port Services Industry personnel in the near future, it is hoped that there will be a steady flow of local skilled and certified workers.

Objective 2: Occupational Descriptions

The Occupational Descriptions for all the different job titles were obtained during the workshops and further confirmed during the survey. These Occupational Descriptions will also serve as reference of job scope and the required competencies for NOSS development.

Objective 3: Skills In Demand

Based on the survey findings, the survey respondents highlighted the skills in demand (Please refer the details according to the respective areas in table 4.3) are as follows:

- Technical judgement
- Storage stacking skills
- Safety training
- Information Technology (IT) and Human Resource (HR) skills
- Navigational skills and utilise VTMS (Vessel Traffic Management System)
- Helmsman skills
- Green Technology Skills
- Skills in interpreting the International Code for the Construction and Equipment of Ships (IGC, IBC etc)

The skills above are encouraged to be included in the training curriculum according to the respective areas.

Overall Conclusion

It is hoped that the result of this Occupational Framework research and development work will be able to be used as a reference as how to fulfill the future plans of developing skilled personnel and certifying Malaysians in the Port Services Industry towards enhancing services provided by the port operators.

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ANNEX 1

MOSQF LEVEL DESCRIPTORS

MALAYSIAN OCCUPATIONAL SKILLS QUALIFICATION FRAMEWORK (MOSQF)
LEVEL DESCRIPTORS

LEVEL	LEVEL DESCRIPTOR
1	Competent in performing a range of varied work activities, most of which are **routine and predictable.**
2	Competent in performing **a significant range of varied work activities**, performed in a variety of context. Some of the **activities are non-routine** and required individual responsibility and autonomy.
3	Competent in performing **a broad range of varied work activities**, performed in a variety of context, most of which are **complex and non-routine.** There is considerable responsibility and autonomy and **control or guidance of others** is often required.
4	Competent in performing **a broad range of complex technical or professional work** activities carried out in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present. **Higher level of technical skills** should be demonstrated.
5	Competent in applying a significant range of **fundamental principles and complex techniques across** a wide and often unpredictable variety of contexts. Very **substantial personal autonomy** and often significant responsibility for the work of others and for the allocation of substantial resources feature strongly, as do personal accountabilities for **analysis and diagnosis, design, planning, execution and evaluation**. Specialisation of technical skills should be demonstrated.
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 of schools of thought and the theories that underpin them**
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**
8	Achievement at this level reflects the **ability to develop original understanding** and extend an 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.

ANNEX 2

LIST OF CONTRIBUTORS

LIST OF INDUSTRY PANEL MEMBERS FOR THE PORT SERVICES INDUSTRY OCCUPATIONAL FRAMEWORK DEVELOPMENT

NO	NAME	EXPERTISE	POSITION	ORGANISATION
1.	Ir. Abdul Nasser Bin Abdul Wahab	Port Operations	Director	M.E.C Engineering Technologies Sdn Bhd
2.	Pn. Fazilah Surkisah Bt. Mohammad	Legislation	Legal Advisor	Port Klang Authority
3.	En. Hermee Tahir	Human Resource	Head of Human Resource Department	Johor Port Berhad
4.	En. Ahmad Aminurrashid B. Abdul Aziz	Human Resource	Senior Executive, Human Capital	Northport (M) Berhad
5.	En. Kamal Ariffin B. Idris	Marine Operations Department	Marine Senior Manager	Port Klang Authority
6.	En. Rumlan Bin Mukhtar	Marine Operations Department	Senior Surveyor	Port Klang Authority
7.	Tn. Hj. Azman Bin Abdul Aziz	Port Operations Skills Training	Training Advisor, JP Skills Centre (JPSC)	Johor Port Berhad
8.	En. Shamsul Haniff Bin Saliman	Human Resource	Senior Executive, Human Capital	North Ports (M) Berhad

LIST OF THE PORT SERVICES INDUSTRY
OCCUPATIONAL FRAMEWORK TECHNICAL EVALUATION COMMITTEE

NO	NAME	POSITION/ORGANISATION
1.	En. Siva Sangar Krishnan	Senior Principal Assistant Secretary Maritime Division, Ministry of Transport
2.	Pn. Mimi Mazira binti Mohd Idris	Secretary ASEAN Port Association Malaysia
3.	Pn. Lai Fui Nar	Senior Manager Sabah Ports Sdn Bhd.
4.	Pn. Patsy Tiasing	Human Resource Manager Sabah Ports Sdn Bhd.
5.	En. Abdul Halim Bin Abdul Kader	Acting Senior General Manager, CEO Office, Penang Port Sdn Bhd.
6.	Capt. Akashah Md Dom	General Manager, Marine Services PTP Sdn Bhd.

LIST OF OFFICERS OF DEPARTMENT OF SKILLS DEVELOPMENT (DSD) INVOLVED IN THE PORT SERVICES INDUSTRY OCCUPATIONAL FRAMEWORK DEVELOPMENT

NO	NAME	POSITION/ ORGANISATION
1.	Pn. Siti Hasmah Binti Mustapha	Principal Assistant Director, DSD
2.	Pn. Noorita Binti Lateh	Senior Assistant Director, DSD
3.	Pn. Norazreen Binti Othman	Assistant Director, DSD
4.	En. Raghu a/l Thiyagarajan	Assistant Director, DSD

LIST OF FACILITATORS FOR THE PORT SERVICES INDUSTRY OCCUPATIONAL FRAMEWORK DEVELOPMENT

FACILITATORS

Y.M ENGKU MOHD 'AZMI DATO' ENGKU HATIM

DR. AMIRON ISMAIL

RESEARCHER

ROSNIZA ISMAIL

EVARINA AMIRON

ANNEX 3

QUESTIONNAIRE

SOAL SELIDIK KERANGKA PEKERJAAN
BAGI INDUSTRI PERKHIDMATAN PELABUHAN

Salam 1 Malaysia.

Jabatan Pembangunan Kemahiran (JPK), Kementerian Sumber Manusia, sedang menjalankan kaji selidik keatas Kerangka Pekerjaan bagi Industri Perhidmatan Pelabuhan. Analisis ini akan menghasilkan struktur pekerjaan, tajuk pekerjaan, dan deskripsi kerja, dimana ianya untuk kegunaan Kerajaan, sektor swasta, pelabur, majikan, pekerja, pendidik atau mana-mana kakitangan yang terlibat sama ada secara langsung atau tidak langsung dengan industri ini.

Kami ingin mengucapkan ribuan terima kasih atas kerjasama anda dalam menjawab soal selidik ini. Dapatan ini akan digunakan sebagai data lapangan untuk menjalankan analisis yang menyeluruh dalam Kerangka Pekerjaan Industri.

Sila isi tempat kosong yang disediakan. Sebarang kesulitan amat dikesali. Komunikasi lebih lanjut dengan responden akan dilakukan untuk mengesahkan hasil kajian kami.

BUTIRAN RESPONDEN

Nama : _____

Jawatan :_____

Organisasi :_____

Tarikh :_____

SEKSYEN 1 : TENAGA KERJA INDUSTRI

SOALAN 1 : PEKERJAAN ANDA DALAM INDUSTRI PELABUHAN

Sila isi nama pekerjaan anda mengikut tahap pekerjaan serta skop kerja mengikut bidang kerja yang berkaitan dengan anda.

BIDANG PEKERJAAN :_____

TAHAP PEKERJAAN	NAMA PEKERJAAN	SKOP KERJA
a) Pengkhususan dan Inovasi		
b) Pengurusan Teknikal		
c) Penyelarasan/ Penyeliaan		
d) Operasi / Sokongan		

Nota:

a) Pengkhususan dan Inovasi:
Pekerja perlu mempunyai kecekapan dalam inovasi dan pengkhususan berkaitan dengan bidang kerja tertentu.

b) Pengurusan Teknikal:
Pekerja yang bertanggungjawab untuk menguruskan aspek teknikal di bidang kerja.

c) Penyelarasan/Penyeliaan:
Pekerja bertanggungjawab untuk menyelia sekumpulan pekerja dibawah penyeliaannya dan menyelaras aktiviti kerja di tempat kerja.

d) Operasi/Sokongan
Pekerja bertanggungjawab terhadap operasi jentera, peralatan, kerja sokongan dan lain-lain.

SOALAN 2 : BIDANG-BIDANG PEKERJAAN DALAM INDUSTRI PELABUHAN

ADAKAH ANDA BERSETUJU DENGAN BIDANG PEKERJAAN INDUSTRI PELABUHAN SEPERTI DIBAWAH INI. SILA NYATAKAN BIDANG YANG ANDA TIDAK SETUJU DAN MENGAPA. (Sila rujuk Jadual 1, dibawah ini)

_____

JADUAL 1 : BIDANG PEKERJAAN INDUSTRI PERKHIDMATAN PELABUHAN (OCCUPATIONAL AREAS OF PORT SERVICES INDUSTRY)

MAIN JOB AREAS	MARINE SERVICES	CARGO HANDLING	FREE ZONE	ANCILLARY SERVICES
SUB - JOB AREAS	Pilotage	Containerised	Distribution	Bunkering
	Mooring	Non-Containerised	Transit	Water Supply
	Port Dredging	Cruise / Passenger	Assembly	Waste Disposal
	Towage		Storage	Ship Chandling
	Maintenance		Rebranding	Diving Services
	Navigational Support		Packaging	Stevedoring
				Lay Up

SOALAN 3: NAMA PEKERJAAN DALAM INDUSTRI PELABUHAN MENGIKUT BIDANG PEKERJAAN

DIBAWAH INI IALAH JADUAL UNTUK NAMA- NAMA PEKERJAAN UNTUK SETIAP BIDANG YANG TERDAPAT DALAM JADUAL 1.

Sila isikan nama–nama jawatan dalam jadual 2, yang berkaitan dengan bidang anda.

Dibawah ini ialah contoh untuk mengisi jadual 2

BIDANG UTAMA PEKERJAAN	**BIDANG PEKERJAAN**	**TAHAP 1**	**TAHAP 2**	**TAHAP 3 (Penyeliaan)**	**TAHAP 4 (Pengurusan Teknikal)**	**TAHAP 5 (Pengkhususan)**
		(Operasi)	**(Operasi)**			
INFORMATION SYSTEM MANAGEMENT	***Software Application***	*Assistant Programmer*	*Programmer*	*Analyst Programmer*	*Systems Analyst*	*Software Application Manager*
	Computer Hardware Systems	*Asst Computer Hardware Technician*	*Computer Hardware Technician*	*Senior Hardware Technician*	*Hardware Engineer*	*Hardware Systems Manager*
	Networking Systems	*Asst Network Technician*	*Computer Network Technician*	*Senior Network Technician*	*Network Engineer*	*Network Systems Manager*

JADUAL 2 : NAMA PEKERJAAN MENGIKUT TAHAP PEKERJAAN.

BIDANG UTAMA PEKERJAAN	BIDANG PEKERJAAN	TAHAP 1 (Operasi)	TAHAP 2 (Operasi)	TAHAP 3 (Penyeliaan)	TAHAP 4 (Pengurusan Teknikal)	TAHAP 5 (Pengkhususan)
Marine Services	*Pilotage*					
	Mooring					
	Port Dredging					
	Towage					
	Navigational Support					
Cargo Handling	*Containerised*					
	Non – Containerised					
	Cruise/Passanger					
Free Zone	*Distribution*					
	Transit					
	Assembly					
	Storage					
	Rebranding					

BIDANG UTAMA PEKERJAAN	BIDANG PEKERJAAN	TAHAP 1 (Operasi)	TAHAP 2 (Operasi)	TAHAP 3 (Penyeliaan)	TAHAP 4 (Pengurusan Teknikal)	TAHAP 5 (Pengkhususan)
	Packaging					
Ancillary Services	*Bunkering*					
	Water Supply					
	Waste Disposal					
	Ship Chandling					
	Diving Services					
	Stevedoring					
	Lay Up					
(Jika ada bidang kerja yang lain yg tidak tersenarai diatas, sila isi disini)						

SOALAN 4 : BIDANG PEKERJAAN YANG DIPERLUKAN (JOBS IN DEMAND)

Sila pilih Bidang Pekerjaan (Job Areas) daripada Jadual 2 diatas dan isikan didalam *column* A dibawah ini. Isikan nama pekerjaan yang diperlukan (*jobs in demand)* didalam *column* B. Seterus berikan jawapan didalam *column* C, D , E

(A) **BIDANG PEKERJAAN** *(JOB AREAS)*	**(B)** **NAMA PEKERJAAN YANG DIPERLUKAN** *(JOBS IN DEMAND)*		**(C)** **SILA NYATAKAN JUSTIFIKASI KEPERLUAN**	**(D)** **ISU DAN CABARAN YANG BERKAITAN DENGAN KEPERLUAN TERHADAP PEKERJAAN**	**(E)** **CADANGAN PENYELESAIAN UNTUK MENYEDIAKAN TENAGA KERJA**
	NAMA PEKERJAAN	**TAHAP**			
CONTOH JAWAPAN					
Cargo Handling *(rujuk jadual 2)*	*Cargo Handling Supervisor*	*3*	*Penyelia tidak mencukupi*	*Kerja-kerja pengendalian kargo tidak dapat dilaksanakan mengikut jadual*	*Memberi peluang pekerjaan kepada belia menganggur*
1.					
2.					

(A) **BIDANG PEKERJAAN** *(JOB AREAS)*	**(B)** **NAMA PEKERJAAN YANG DIPERLUKAN** *(JOBS IN DEMAND)*		**(C)** **SILA NYATAKAN JUSTIFIKASI KEPERLUAN**	**(D)** **ISU DAN CABARAN YANG BERKAITAN DENGAN KEPERLUAN TERHADAP PEKERJAAN**	**(E)** **CADANGAN PENYELESAIAN UNTUK MENYEDIAKAN TENAGA KERJA**
	NAMA PEKERJAAN	**TAHAP**			
3.					
4.					
5.					
6.					

SOALAN 5 : KEPERLUAN KEMAHIRAN PEKERJA YANG SEDIA ADA

Sila pilih Bidang Pekerjaan (Job Areas) daripada Jadual 2 diatas dan isikan didalam *column* A dibawah ini. Isikan nama pekerjaan yang memerlukan kemahiran tambahan dalam *column* B. Seterus berikan jawapan didalam *column* C, D , E dimana yang berkaitan.

(A) **BIDANG KERJA**	**(B)** **NAMA PEKERJAAN & TAHAP**	**(C)** **KEMAHIRAN TEKNIKAL DIPERLUKAN** **(TECHNICAL SKILLS)**	**(D)** **JURANG KEMAHIRAN (SKILLS GAP)** **(*Sila nyatakan kekurangan kemahiran)***	**(E)** **KEMAHIRAN BARU (EMERGING SKILLS)** ***(Kemahiran yang tidak teras tetapi diperlukan pada masa akan datang)***
CONTOH JAWAPAN *CARGO HANDLING*	Operator Kren – Tahap 3	*Kemahiran kejuruteraan mekanikal*	*Kemahiran IT*	*Teknologii Hijau*
a)				
b)				
c)				

(A) **BIDANG KERJA**	(B) **NAMA PEKERJAAN & TAHAP**	(C) **KEMAHIRAN TEKNIKAL DIPERLUKAN (TECHNICAL SKILLS)**	(D) **JURANG KEMAHIRAN (SKILLS GAP)** **(*Sila nyatakan kekurangan kemahiran)***	(E) **KEMAHIRAN BARU (EMERGING SKILLS)** ***(Kemahiran yang tidak teras tetapi diperlukan pada masa akan datang)***
d)				
e)				
f)				
g)				

SOALAN 6 : ISU DAN CABARAN INDUSTRI PERKHIDMATAN PELABUHAN

Sila tentukan tahap cabaran dan kesukaran yang dihadapi industri pada masa kini

NO	ITEM	SILA NYATAKAN CABARAN MENGIKUT SKALA (1 – paling mencabar kepada sehingga, 9 – paling kurang mencabar) (tanda X dalam column yang berkenaan)								
		1	2	3	4	5	6	7	8	9
a)	Perdagangan Antarabangsa									
b)	Persekitaran									
c)	Keterampilan dan tenaga kerja									
d)	Kemajuan teknologi									
e)	Pelaburan besar (modal)									
f)	Undang- undang antarabangsa									
g)	Teknologi hijau									
h)	Pasaran (persaingan)									
i)	Penyeludupan manusia									
j)	Kos operasi									

NO	ITEM	SILA NYATAKAN CABARAN MENGIKUT SKALA (1 – paling mencabar kepada sehingga, 9 – paling kurang mencabar) (tanda X dalam column yang berkenaan)								
		1	2	3	4	5	6	7	8	9
k)	Keselamatan									
l)	(Lain-lain, jika ada)									
m)										
n)										
o)										
p)										

SEKSYEN 2 : LATAR BELAKANG INDUSTRI

SOALAN 1

Sila senaraikan badan-badan kawal selia utama dalam organisasi anda

(CONTOH JAWAPAN -- Lembaga Pelabuhan Persekutuan)

a)

b)

SOALAN 2

Sila senaraikan undang-undang yang berkaitan dalam organisasi anda

(CONTOH JAWAPAN - Port Authorities Act 1963)

a)

b)

SOALAN 3

Apakah program utama Industri dan Kerajaan, sekiranya ada, untuk menyokong pembangunan dalam industri pelabuhan?

a)

b)

SOALAN TAMAT
TERIMA KASIH ATAS KERJASAMA ANDA

ANNEX 4:

OCCUPATIONAL STRUCTURE (OS)

MSIC Section H : Transportation and Storage																
Port Services Industry @ MSIC Division 52: Warehousing and support activities for transportation																
Sub-Sector	**Marine Services**				**Warehousing**			**Cargo Handling**					**Ancillary Services**			
Job Area /Level	Navigational Support	Pilotage	Towage	Mooring	Storage	Distribution & Consolidation	Packaging	Cruise / Passenger	Containerised	Non-Containerised	Stevedoring		Bunkering	Waste Disposal	Ship Chandling	Lashing
Level 8	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*
Level 7	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*
Level 6	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*	*N/L*
Level 5	*N/L*	Pilot Super-intendent	*N/L*	*N/L*	Warehousing Manager			Operation Manager					*N/L*	*N/L*	*N/L*	*N/L*
Level 4	*N/L*	Pilot★	*N/L*	*N/L*	Warehousing Executive			Asst. Operation Manager					*N/L*	*N/L*	*N/L*	*N/L*
Level 3	Controller	*N/L*	Tug Master ★	Mooring Supervisor	Storage Supervisor	Consolidation & Distribution (C&D) Supervisor	Packaging Supervisor	Operation Supervisor			Stevedore Supervisor		Bunkering Services Supervisor	*N/L*	Ship Chandling Supervisor	Lasher Supervisor
Level 2	Asst Controller	*N/L*	Asst Tug Master	Helmsman ★	Storage Assistant ★	Consolidation & Distribution (C&D) Assistant ★	Packaging Assistant	Equipment Operator			Signal man	Winch man	Pumpman	Waste Disposal Equipment Operator	Ship Chandling Equipment Operator	Lashing Foreman
Level 1	*N/L*	*N/L*	Boat Crew ★		Cargo/Equipment Handler ★			Cargo Handler/Stevedore ★					Bunkering Rigger	Waste Disposal Rigger	Ship Chandling Cargo Handler	Lasher

Note : Critical Job Titles - ★

ANNEX 5

OCCUPATIONAL DESCRIPTIONS (OD)

SUB-SECTOR: MARINE SERVICES
AREA : NAVIGATIONAL SUPPORT

NAVIGATIONAL SUPPORT ASSISTANT CONTROLLER (LEVEL 2)

The Navigational Support Assistant Controller is designated to perform radar communication and port system communication, carry out radar tracking by controlling range scale, bearing cursor and distance cursor. The Navigational Support Assistant Controller is also required to carry out control tower safety and observe control tower communication, assist in checking the related equipment or devices, in preventing ships under their navigational control from engaging in unsafe operations and assist in supervising port system speed and efficiency.

Responsibilities may include:

- Carry out radar communication, port system communication and control tower communication
- Carry out system tracking and radar tracking by controlling range scale, bearing cursor and distance cursor
- Assist in checking related equipment or devices.
- Assist in preventing ships under their navigational control from engaging in unsafe operations
- Assist in supervising port system speed and port system efficiency
- Assist in control tower safety

Knowledge, Skills, Attitude

A Navigational Support Controller needs:

- to have knowledge about radar communication
- to have the ability to work as part of a team
- to have the ability to follow through and accomplish goals.
- to be able to work well under pressure while being detail oriented.
- to be reliable and punctual

SUB-SECTOR : MARINE SERVICES
AREA : NAVIGATIONAL SUPPORT

NAVIGATIONAL SUPPORT CONTROLLER (LEVEL 3)

The Navigational Support Controller is designated to supervise radar communication and the related equipment or devices. He/she also prevent ships under their navigational control from engaging in unsafe operations. The Navigational Support Assistant Controller have to coordinate radar tracking by control range scale, bearing cursor and distance cursor, supervise port system communication, coordinate port system speed, supervise system efficiency and execute system tracking. He/she can coordinate control tower safety and supervise control tower communication as well.

Responsibilities may include:

- Prevent ships under their navigational control from engaging in unsafe operations
- Supervise system tracking and radar tracking by controlling range scale, bearing cursor and distance cursor
- Supervise radar communication, control tower communication, port system communication and the related equipment or devices
- Supervise port system speed, port system efficiency and control tower safety

Knowledge, Skills, Attitude

A Navigational Support controller needs:

- to have knowledge about radar communication
- to have the ability to work as part of a team
- to be able to work well under pressure while being detail oriented
- to have the ability to independently solve problems using good judgment and creativity.
- to have leadership skills in establishing and maintaining cooperative, trustworthy, directional working relationships with other employees.
- to be reliable and punctual.

SUB-SECTOR : MARINE SERVICES
AREA : PILOTAGE

PILOT (LEVEL 4)

A Pilot is designated to prepare and setup equipment and devices for Very High Frequency (VHF) communication in order to carry out VHF radio communication, supervise the efficiency of VHF radio usage and pilot office safety at port in accordance with safety regulations provided. The pilot is also required to assist in guiding the speed of the boat to reach the destination based on specialised knowledge of local winds, weather, water depths, tides, currents, and hazards. Additionally the pilot is required to implement manpower tasking and schedule and coordinate pilot boat complaint management.

Responsibilities may include:

- Interpret VHF radio instruction
- Prepare and setup equipment and devices for VHF communication
- Carry out VHF radio communication
- Supervise the efficiency of VHF radio usage
- Supervise pilot office safety at port in accordance with safety regulations provided
- Guide pilot boat direction to destination
- Assist in guiding the speed of boat to reach the destination based on specialised knowledge of local winds, weather, water depths, tides, currents, and hazards.
- Implement manpower tasking according to schedule
- Coordinate pilot boat complaint management

Knowledge, Skills, Attitude

A Pilot needs:

- to have knowledge about equipment and devices of VHF communication
- to comply to safety regulations provided
- the ability to work as part of a team
- to have the ability to independently solve problems using good judgment and creativity.

SUB-SECTOR: MARINE SERVICES
AREA : PILOTAGE

PILOT SUPERINTENDENT (LEVEL 5)

A Pilot Superintendent is designated to analyse VHF radio communication and the efficiency of VHF radio usage, consult maps, charts, weather reports, and navigation equipment to determine and direct ship movements, monitor the speed of pilot boat based on specialized knowledge of local winds, weather, water depths, tides, currents, and hazards, manage pilot office safety at port in accordance with safety regulations provided , plan the activities of port pilot office, manpower tasking and pilot boat complaints management.

Responsibilities may include:

- Analyse VHF radio communication and the efficiency of VHF radio usage
- Consult maps, charts, weather reports, and navigation equipment to determine and direct ship movements
- Monitor the speed of pilot boat based on specialized knowledge of local winds, weather, water depths, tides, currents, and hazards.
- Manage pilot office safety at port in accordance with safety regulations provided
- Plan the activities of port pilot office
- Plan manpower tasking and schedule and pilot boat complaints management

Knowledge, Skills, Attitude

A Pilot Superintendent needs:

- to have knowledge about equipment and devices of VHF communication
- to comply to safety regulations provided
- the ability to work well under pressure while being detail oriented.
- the ability to independently solve problems using good judgment and creativity.
- to have leadership skills in establishing and maintaining cooperative, trustworthy, directional working relationships with other employees.

SUB-SECTOR: MARINE SERVICES
AREA : TOWAGE, MOORING

BOAT CREW (LEVEL 1)

The role may also be called: Towage Mooring Crew, Mooring Boat Crew

The Boat Crew personnel is responsible to identify rig towing and mooring line, utilise first aid equipment, act as the surface swimmer and assist in operating damage control equipment.

Responsibilities may include:

- Identify rig towing and mooring lines
- Utilise first aid equipment
- Act as the surface swimmer
- Assist in operating damage control equipment.

Knowledge, Skills, Attitude

A Boat Crew needs:

- to have basic navigation (including radar) and boat handling
- to have emergency and casualty control skills
- to have watchstanding and communications skills
- to have a knowledge of preventive maintenance procedures for the boat in port

SUB-SECTOR: MARINE SERVICES
AREA : TOWAGE

ASSISTANT TUG MASTER (LEVEL 2)

The Assistant Tug Master is responsible to assist ship movements in ports, instructing tugboats, operation of all vessel equipment and workers on deck to rig towlines as well, identify course and towing speed on basis of local winds, weather, tides and current. The Assistant Tug Master steers the tugboat to push or pull vessels to the destination and to berth and un-berth ships, avoiding reefs, outlying shoals, and other hazards to shipping,

Responsibilities may include:

- Identify course and towing speed on basis of specialised knowledge of local winds, weather, tides and current
- Steer tugboat to push or pull vessels to destination and to berth and un-berth ships, avoiding reefs, outlying shoals, and other hazards to shipping
- Utilise navigation devices, such as radar, sonic depth finder, compass and sextant and other aids to navigation, such as lighthouses and buoys
- Assist in ship movements in ports and in giving instruction to tugboat
- Assist in performance of general maintenance work
- Assist in operation of all vessel equipment
- Assist workers on deck to rig towlines

Knowledge, Skills, Attitude

An Assistant Tug Master needs:

- to have detail knowledge of the waters he/she works in to avoid incidents
- to have a detail knowledge of navigation devices
- to have the ability to work in all weather conditions often in shift patterns
- to have the ability to work as part of a team

SUB-SECTOR: MARINE SERVICES
AREA : MOORING

MOORING HELMSMAN (LEVEL 2)

The Mooring Helmsman is designated to assist in checking and respond to the information shown on the instrument panel on the boat, carry out routine maintenance checks on the engine and weed-hatch as laid down. The Mooring Helmsman is also responsible to operate fire equipment, ship's rescue boats and perform watch keeping duties on the bridge and steers the ship applying the helm orders given by the watchkeeping officer. As a Mooring Helmsman, he/she needs to assist the bridge officers in ship's navigation, maintenance of nautical charts and maps.

Responsibilities may include:

- Steer the boat or any type of transportation used in or on the water safely and smoothly.
- Perform watch keeping duties on the bridge and steers the ship applying the helm orders given by the watchkeeping officer
- Carry out routine maintenance checks on the engine and weed-hatch as laid down in the
- Operate fire equipment and ship's rescue boats
- Assist in checking and responding to the information shown on the instrument panel on the boat
- Assist the bridge officers in ship's navigation, maintenance of nautical charts and maps

Knowledge, Skills, Attitude

A Mooring Helmsman needs:

- to have the ability to work in multi work culture environment
- to have the ability to work as part of a team and respect all other volunteers
- to be able to work well under pressure while being detail oriented
- to follow the safety procedures and policies set down in the crew handbook.

SUB-SECTOR: MARINE SERVICES
AREA : TOWAGE

TUG MASTER (LEVEL 3)

The Tug Master is designated to determine course and towing speed, supervise ship movements in ports, the steering of the tugboat and check navigation devices, operation of all vessel equipment workers on deck to rig towlines and perform general maintenance work.

Responsibilities may include:

- Determine course and towing speed on basis of specialised knowledge of local winds, weather, tides and current
- Check navigation devices, such as radar, sonic depth finder, compass and sextant and other aids to navigation, such as lighthouses and buoys
- Perform general maintenance work
- Supervise ship movements in ports
- Supervise operation of all vessel equipment
- Supervise workers on deck to rig towlines
- Supervise the steering of the tugboat, to push or pull vessels to destination and to berth and un-berth ships, avoiding reefs, outlying shoals, and other hazards to shipping
- Assist in giving instruction to tugboat

Knowledge, Skills, Attitude

A Tug Master needs:

- to have detail knowledge of the waters he/she works in to avoid incidents.
- to have detail knowledge of navigation devices
- the ability to work in all weather conditions often in shift patterns
- to have leadership skills

SUB-SECTOR : MARINE SERVICES
AREA : MOORING

MOORING SUPERVISOR (LEVEL 3)

The Mooring Supervisor is responsible to supervise ocean-going oil tanker lightering operations to ensure that safety, environmental procedures, operating procedures and weather parameters are followed, transfer of oil into the lightering vessel to ensure that no leaks or spills occur. They also ensure that workers of both the lightering vessel and the vessel to be lightered comply with safety requirements. The Mooring Supervisor is also designated to supervise the disengagement of hoses and maneuvering of vessels upon completion of the operation.

Responsibilities may include:

- Supervise ocean-going oil tanker lightering operations
- Supervise the transfer of oil into the lightering vessel to ensure that no leaks or spills occur
- Supervise the disengagement of hoses and maneuvering of vessels upon completion of the operation.
- Ensure that safe and environmental procedures, operating procedures and weather parameters are followed
- Ensure that workers of both the lightering vessel and the vessel to be lightered are familiar with and comply with safety requirements.

Knowledge, Skills, Attitude

A Mooring Supervisor needs:

- to be excellent in English – written, verbal and comprehension.
- to possess understanding of mooring specifications and management.
- to have sufficient experience and ability to proactively apply knowledge and skills to continually improve operations

SUB-SECTOR: WAREHOUSING
AREA : STORAGE, DISTRIBUTION & CONSOLIDATION AND PACKAGING

CARGO/EQUIPMENT HANDLER (LEVEL 1)

This role may also be called: Storage Equipment handler, Consolidation & Distribution (C&D) Cargo Handler, Consolidation & Distribution (C&D) Equipment Handler, Packaging Cargo Handler

The Storage Cargo Handler is responsible to identify cargo compatibility at port, obtain cargo consignee/shipper details, determine the types of cargo and goods carried on a ship and segregate area or space at the port.

Responsibilities may include:

- Identify the types of cargo and goods carried on a ship
- Identify warehouse area or space utilisation
- Identify cargo compatibility
- Obtain cargo consignee/shipper and details of consignee/shipper
- Segregate warehouse area or space at the port
- Confirm equipment compatibility in allocated space

Knowledge, Skills, Attitude

A Storage Cargo Handler needs:

- to have ability to work as part of a team
- to adhere to safety procedures and policies set down in the crew handbook.
- to have ability to learn new tasks as needs arise and retain information, must lift 40 lbs. on a frequent basis and up to 70 lbs. on a less than frequent basis; sit for sporadic periods of time, and stand for up to 8 hours at a time
- to have ability to perform in a fast-paced deadline oriented work environment.
- to have ability to follow instructions and to effectively complete tasks in a timely and safe manner.

SUB-SECTOR: WAREHOUSING
AREA :STORAGE

STORAGE ASSISTANT (LEVEL 2)

The Storage Assistant is responsible to assist in checking import/export documentation to determine cargo contents, ensure the cargo consignment volume, record cargo inventory, comply to area/space stacking factor and check equipment suitability.

Responsibilities may include:

- Assist in checking import/export documentation to determine cargo contents
- Ensure cargo consignment volume
- Record cargo inventory
- Comply to area/space stacking factor
- Carry out storage area/ space segregation
- Confirm storage area/ space utilisation
- Identify storage equipment suitability
- Check storage area/ space compatibility

Knowledge, Skills, Attitude

A Storage Assistant needs:

- to have problem solving skills
- to have analytical skills
- to have documentation skills
- to have data entry skills
- to have time management skills
- to have reporting skills
- to have ability to work in a team
- to have knowledge in inventory control
- to have familiarity with equipment maintenance

SUB-SECTOR: WAREHOUSING
AREA : CONSOLIDATION & DISTRBUTION (C&D)

CONSOLIDATION & DISTRBUTION (C&D) ASSISTANT (LEVEL 2)

The Consolidation & Distribution (C&D) Assistant is responsible to carry out transportation coordination from origin to destination, ensure transportation urgency, transportation capacity and also transportation compatibility.

Responsibilities may include:

- Identify the types of cargo and goods carried on a ship.
- Identify cargo consignment volume
- Identify equipment capacity
- Identify transportation type
- Locate consignee/shipper cargo
- Record cargo inventory
- Carry out cargo compatibility confirmation
- Carry out transportation from origin to destination
- Confirm cargo area or space utilisation
- Execute warehouse area or space segregation at the port
- Assist in preparing import/export documentation to determine cargo contents
- Assist in scheduling equipment suitability
- Ensure warehouse area/ space compatibility
- Ensure transportation urgency ,capacity and compatibility

Knowledge, Skills, Attitude

A Consolidation & Distribution (C&D) Assistant needs:

- to have ability to work in team
- to have problem solving skills
- to have time management skills
- to have reporting skills
- to have knowledge in inventory control
- to have documentation skills
- to have data entry skills
- to follow the safety procedures and policies set down in the crew handbook

SUB-SECTOR: WAREHOUSING
AREA : PACKAGING

PACKAGING ASSISTANT (LEVEL 2)

The Packaging Assistant is responsible to assist in confirming cargo types and cargo fragility, assist the superior to ensure cargo ease of handling and double checking space utilization, assist preparing complete documentation, identify packaging material type, packaging material value-add, packaging material cost and packaging material design.

Responsibilities may include:

- Assist in confirming cargo types
- Assist in confirming cargo fragility
- Assist in ensuring cargo ease of handling
- Assist in double checking space utilization
- Assist in preparing a correct and complete documentation
- Identify packaging material type, packaging material value-add, packaging material cost and packaging material design

Knowledge, Skills, Attitude

A Packaging Assistant needs:

- to have ability to work in team
- to have time management skills
- to have reporting skills
- to have documentation skills,
- to have data entry skills

SUB-SECTOR: WAREHOUSING
AREA : STORAGE

STORAGE SUPERVISOR (LEVEL 3)

The Storage Supervisor is responsible to check import/export documentation to determine cargo contents, monitor the cargo consignment volume, check cargo inventory records, supervise area/space stacking, area/space segregation, confirm area/ space utilisation and ensure area/ space compatibility. The personnel are also responsible to monitor equipment suitability and supervise equipment capacity.

Responsibilities may include:

- Check import/export documentation to determine cargo contents
- Check cargo inventory records
- Monitor cargo consignment volume
- Supervise storage area/space stacking
- Supervise storage area/ space segregation
- Supervise storage area/ space utilisation
- Ensure a storage area/ space compatibility
- Confirm equipment suitability

Knowledge, Skills, Attitude

A storage supervisor needs:

- to have problem solving skills
- to have analytical skills
- to have documentation skills
- to have data entry skills
- to have time management skills
- to have reporting skills
- to have ability to work in a team
- to have knowledge in inventory control
- to have familiarity with equipment maintenance

SUB-SECTOR: WAREHOUSING
AREA : CONSOLIDATION & DISTRBUTION (C&D)

CONSOLIDATION & DISTRBUTION (C&D) SUPERVISOR (LEVEL 3)

The Consolidation & Distribution (C&D) Supervisor is responsible to supervise transportation activities, confirm transportation type, confirm transportation origin/ destination, confirm transportation urgency, confirm transportation capacity and also ensure transportation compatibility.

Responsibilities may include:

- Confirm cargo consignment volume
- Confirm equipment capacity
- Confirm transportation origin/ destination, transportation urgency, transportation capacity and transportation
- Supervise area/ space compatibility
- Supervise transportation activities
- Prepare import/export documentation to determine cargo contents
- Schedule equipment suitability

Knowledge, Skills, Attitude

A Consolidation & Distribution (C&D) Supervisor needs:

- to have ability to work in team
- to have problem solving skills
- to have analytical skill
- to have time management skills
- to have reporting skills
- to have knowledge in inventory control,
- to have documentation skills,
- to have familiarity with equipment
- to have data entry skills
- to follow the safety procedures and policies set down in the crew handbook

SUB-SECTOR: WAREHOUSING
AREA : PACKAGING

PACKAGING SUPERVISOR (LEVEL 3)

The Packaging Supervisor is responsible to confirm cargo types and cargo fragility, ensure cargo ease of handling, check space utilization, prepare complete documentation, in terms of packaging material confirmation, the packaging supervisors need to confirm packaging material type, confirm packaging material value-add, confirm packaging material cost and also confirm packaging material design.

Responsibilities may include:

- Check space utilization
- Prepare complete documentation
- Confirm cargo types and cargo fragility
- Confirm packaging material type
- Confirm packaging material value-add
- Confirm packaging material cost
- Confirm packaging material design
- Ensure cargo ease of handling

Knowledge, Skills, Attitude

A packaging supervisor needs:

- to have ability to work in team
- to have problem solving skills
- to have analytical skill
- to have time management skills
- to have reporting skills
- to have knowledge in inventory control,
- to have documentation skills,
- to have familiarity with equipment
- to have data entry skills
- to follow the safety procedures and policies set down in the crew handbook

SUB-SECTOR: WAREHOUSING
AREA : STORAGE, CONSOLIDATION & DISTRBUTION (C&D), PACKAGING

WAREHOUSE EXECUTIVE (LEVEL 4)

The Warehouse Executive is responsible to administer cargo compatibility cargo consignee/ shipper, propose cargo storage or segregation policy, collate cargo consignment volume in order to monitor cargo inventory and monitor area/space utilization. As a Warehouse Executive, he/she is designated to administer equipment fleet size & capacity and administer equipment cost-effectiveness.

Responsibilities may include:

- Administer cargo compatibility principles
- Administer equipment fleet size, capacity and cost-effectiveness
- Coordinate cargo consignee/ shipper
- Collate cargo consignment volume
- Monitor cargo inventory
- Monitor transportation urgency and cost-effectiveness
- Monitor documentation correct and complete
- Propose area/space stacking and segregation policy
- Propose cargo storage policy
- Monitor area/ space utilization
- Confirm transportation type
- Propose packaging material suitability, material value add,cost and design

Knowledge, Skills, Attitude

A warehouse executive needs:

- to have problem solving skills
- to have analytical skill
- to have time management skills
- to have knowledge in inventory control,
- to have documentation skills,
- to have data entry skills
- to follow the safety procedures and policies set down in the crew handbook
- to have managerial skills
- to have communication skills

SUB-SECTOR: WAREHOUSING
AREA : STORAGE, CONSOLIDATION & DISTRBUTION (C&D), PACKAGING

WAREHOUSE MANAGER (LEVEL 5)

The Warehouse Manager is responsible to create cargo compatibility principles. He/ she also need to consult cargo consignee/ shipper and formulate cargo storage or segregation policy. The warehouse manager has to analyse cargo consignment volume in order to manage cargo inventory and manage area/space utilization, manage equipment fleet size & capacity and equipment cost-effectiveness. In terms of transportation, the warehouse manager is also responsible to manage transportation activities, review packaging material suitability, packaging material value add, material cost and packaging material design.

Responsibilities may include:

- Create cargo compatibility principles
- Consult cargo consignee/ shipper
- Analyse cargo consignment volume
- Formulate cargo storage policy
- Manage cargo inventory
- Manage area/space stacking ,segregation policy and space utilization
- Manage equipment fleet size & capacity and cost-effectiveness
- Review transportation type and origin/ destination
- Manage transportation cost-effectiveness and urgency
- Manage documentation correct and complete
- Review packaging material suitability ,value add, cost, and design

Knowledge, Skills, Attitude

A warehouse manager needs:

- to have problem solving skills
- to have analytical skill
- to have knowledge in inventory control
- to follow the safety procedures and policies set down in the crew handbook
- to have managerial skills

SUB-SECTOR: CARGO HANDLING
AREA : CRUISE/PASSENGER, CONTAINERISED, NON-CONTAINERISED AND STEVEDORING

CARGO HANDLER (LEVEL 1)

This role may also be called: Equipment Handler, Stevedore

The Cargo Handler is responsible to confirm cargo compatibility at port. The personnel will also have to identify cargo consignee/shipper details, types of cargo and goods carried on a ship, identify allocated cargo area or space utilisation, segregate area or space at the designated area and identify if equipment is suitable for cargo handling work.

Responsibilities may include:

- Identify the types of cargo and goods carried on a ship.
- Identify cargo consignee/shipper details
- Identify cargo compatibility
- Identify allocated cargo area or space utilisation
- Identify if equipment is suitable for cargo handling work.
- Segregate area or space at the designated area

Knowledge, Skills, Attitude

A Cargo Handler needs:

- the ability to work as part of a team
- adhere to safety procedures and policies set down in the crew handbook.
- to lift 40 lbs. on a frequent basis and up to 70 lbs. on a less than frequent basis; sit for sporadic periods of time
- the ability to follow instructions and to effectively complete tasks in a timely and safe manner.

SUB-SECTOR: CARGO HANDLING
AREA : CRUISE/PASSENGER, CONTAINERISED AND NON-CONTAINERISED

EQUIPMENT OPERATOR (LEVEL 2)

The Cargo Handling Equipment Operator is designated to determine types of material and the material quantity. The personnel will also have to determine the suppliers for the materials, delivery point at wharf and at anchorage and assist in documentation.

Responsibilities may include:

- Determine types of material
- Determine materials quantity
- Determine material suppliers
- Carry out delivery at wharf
- Carry out delivery at anchorage
- Assist in documentation

Knowledge, Skills, Attitude

A Cargo Handling Equipment Operator needs:

- ability to work as part of a team
- to have documentation skills
- to work well under pressure while being detail oriented
- adhere to safety procedures and policies set down in the crew handbook.
- ability to follow instructions and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: CARGO HANDLING
AREA : STEVEDORING

STEVEDORING SIGNALMAN (LEVEL 2)

The Stevedoring Signalman is designated to interpret and break down any visual or radio message heading, report lost/damaged/inoperable equipment, hoist and haul down PREP for sunrise, morning, and evening colors, and frequently signals morning and evening colors by whistle. The personnel is also required to report to the Officer of The Deck (OOD) of all ships departing and arriving in the port and the movement of small boats in the harbour, and to provide the OOD with advance warning of possible dangers.

Responsibilities may include:

- Interpret and break down any visual or radio message heading
- Report lost/damaged/inoperable equipment
- Hoist and haul down PREP for sunrise, morning, and evening colors, and frequently signals morning and evening colors by whistle
- Report to the Officer of The Deck (OOD) of all ships departing and arriving in the port and the movement of small boats in the harbour, and to provide the OOD with advance warning of possible dangers

Knowledge, Skills, Attitude

A Stevedoring Signalman needs:

- to be proficient in all means of visual communications
- to have a knowledge of correct visual procedures including the uses of procedure signals, procedure signs, and call signs
- to have a knowledge of the location and method of operation of all emergency signalling gear
- to have a knowledge of the meanings of all special flags and pennants
- to adhere to safety procedures and policies set down in the crew handbook.
- the ability to follow instructions and to effectively complete tasks in a timely and safe manner.

SUB-SECTOR: CARGO HANDLING
AREA : STEVEDORING

STEVEDORING WINCHMAN (LEVEL 2)

The Stevedoring Winchman is designated to determine loads or materials according to weight and size specifications, observe equipment gauges and indicators and hand signals of other workers in order to verify load positions or depths, start engines of hoists or winches and use levers and pedals to wind or unwind cable on drums. The personnel will also need to regulate speeds of hoist or winch drums, move or reposition hoists, winches, loads and materials, manually or using equipment and machines.

Responsibilities may include:

- Determine loads or materials according to weight and size specifications.
- Move levers, pedals, and throttles in order to stop, start, and regulate speeds of hoist or winch drums in response to hand, bell, buzzer, telephone, loud-speaker, or whistle signals, or by observing dial indicators or cable marks.
- Start engines of hoists or winches and use levers and pedals to wind or unwind cable on drums.
- Observe equipment gauges and indicators and hand signals of other workers in order to verify load positions and/or depths.
- Operate compressed air, diesel, electric, gasoline, or steam-driven hoists or winches in order to control movement of cableways, cages, derricks, draglines, loaders, railcars, or skips.
- Move or reposition hoists, winches, loads and materials, manually or using equipment and machines such as trucks, cars, and hand trucks.

Knowledge, Skills, Attitude

A Stevedoring Winchman needs:

- physical fitness
- communication skills
- mathematics skills
- to adhere to safety procedures and policies set down in the crew handbook.
- The ability to follow instructions and to effectively complete tasks in a timely and safe manner.

SUB-SECTOR: CARGO HANDLING
AREA : CRUISE/PASSENGER, CONTAINERISED AND NON-CONTAINERISED

CARGO HANDLING OPERATION SUPERVISOR (LEVEL 3)

The Cargo Handling Operation Supervisor is designated to carry out clerical work and data entry. This could include port information, vessel data, and vessel performance data. The personnel will also have to confirm vendors for bunkers, agencies, support services and stevedoring according to instructions and also needs to confirm the availability of cargo handling and securing equipment in ports according to technical department requirements. In terms of report and documentation, the cargo handling operation supervisor needs to assist in preparing a written report following each vessel attendance, summarising all relevant information and forwarding it to the Assistant Operations Manager.

Responsibilities may include:

- Carry out clerical work and data entry
- Coordinate cargo loading operations with the assigned Operation Manager.
- Confirm vendors for bunkers, agency, support services and stevedoring in consultation with the Operation Manager and Technical Services.
- Confirm the availability of cargo handling and securing equipment in ports according to Technical department requirements.
- Assist in preparing a written report following each vessel attendance, summarising all relevant information and forwarding it to the Operations Manager.

Knowledge, Skills, Attitude

A Cargo Handling Operation Supervisor needs:

- to work well under pressure while being detail oriented
- to adhere to safety procedures and policies set down in the crew handbook
- the ability to follow direction and to effectively complete tasks in a timely and safe manner.
- the ability to read, interpret packing lists, technical drawings, booking notes, vessel drawings, charter parties and communication with third parties in English
- to adhere to ISO procedures in operational matters

SUB-SECTOR: CARGO HANDLING
AREA : CRUISE/PASSENGER, CONTAINERISED AND NON-CONTAINERISED

STEVEDORING SUPERVISOR (LEVEL 3)

The Stevedoring Supervisor is responsible to supervise stevedores in their port and ensure that the team's work is done safely according to the requirements of the port, supervise loading and unloading a ship's cargo and must follow the ship's plan to ensure that cargo is loaded and unloaded correctly. The personnel is designated to supervise and operate material-handling equipment to transfer cargo into or from the hold of ships and around dock area. The Stevedoring Supervisor is also responsible to ensure that the immediate working area is safe to work, and that the stevedore is wearing relevant safety equipment and working safely.

Responsibilities may include:

- Supervise stevedores in their port and ensure that the team's work is done safely and to the requirements of the port and its customers.
- Supervise loading and unloading a ship's cargo and must follow the ship's plan to ensure that cargo is loaded and unloaded correctly
- Supervise and operates material-handling equipment (i.e., power winch, grain trimmer, crane, and lift truck) to transfer cargo into or from the hold of ships and around dock area
- Move large cargo containers to and from trucks and other ships
- Execute basic clerical duties and to moor and unmoor vessels upon arrival and departure
- Ensure that the immediate working area is safe to work, and that the stevedore is wearing relevant safety equipment and working safely.

Knowledge, Skills, Attitude

A Stevedoring Supervisor needs:

- leadership skills
- communication skills
- to adhere to safety procedures and policies set down in the crew handbook.
- to be fit and able to work at height or on the water.
- the ability to brief the team on the work to be done and who will be doing it

SUB-SECTOR: CARGO HANDLING
AREA : CRUISE/PASSENGER, CONTAINERISED, NON-CONTAINERISED AND STEVEDORING

CARGO HANDLING ASSISTANT OPERATION MANAGER (LEVEL 4)

The Cargo Handling Assistant Operation Manager is designated to monitor the Operations Supervisor duties, schedule voyages in consultation with the Operations Manager. In terms of report and documentation, the personnel operation manager must prepare a written report following each vessel attendance, summarising all relevant information and forwarding it to the Operations Manager. After that he/she have to present to all meeting attendees a concise but complete summary of the status of each vessel.

Responsibilities may include:

- Monitor the operations supervisor duties
- Schedule voyages in consultation with the Operations Manager
- Present to all meeting attendees a concise but complete summary of the status of each vessel under the Operations Manager's control
- Coordinate cargo loading operations with the assigned Port Captain and Line Manager.
- Determine the availability of cargo handling and securing equipment in ports according to Technical department requirements.
- Prepare a written report following each vessel attendance, summarising all relevant information and forwarding it to the Operations Manager.
- Implement ISO procedures in operational matters

Knowledge, Skills, Attitude

A Cargo Handling Assistant Operation Manager needs:

- management and analytical skills
- to work well under pressure while being detail oriented
- ensure implementation of safety procedures and policies set down in the crew handbook
- the ability to perform in a fast-paced deadline oriented work environment.
- the ability to provide instructions and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: CARGO HANDLING
AREA : CRUISE/PASSENGER, CONTAINERISED, NON-CONTAINERISED AND STEVEDORING

CARGO HANDLING OPERATION MANAGER (LEVEL 5)

The Cargo Handling Operation Manager is designated to plan and analyse port information, vessel data, and vessel performance data, plan and schedule voyages and verify selection of vendors for bunkers, agency, support services and stevedoring. The personnel will also need to verify the availability of cargo handling and securing equipment in ports according to technical department requirements, verify the written report prepared by the Assistant Manager regarding vessel attendance and all relevant information, manage the preventing of cargo claims and vessel damage claims while interacting with sales team to develop cargo transportation solutions.

Responsibilities may include:

- Plan and analyse port information, vessel data, and vessel performance data
- Plan and schedule voyages
- Manage the preventing of cargo claims and vessel damage claims
- Interact with sales team to develop cargo transportation solutions.
- Monitor the operations assistant manager duties
- Verify selection of vendors for bunkers, agency, support services and stevedoring in consultation with the technical services
- Verify the availability of cargo handling and securing equipment in ports according to technical department requirements
- Verify the written report prepared by the assistant manager regarding vessel attendance and all relevant information

Knowledge, Skills, Attitude

A Cargo Handling Operation Manager needs:

- management skills
- analytical skills
- to ensure implementation of safety procedures and policies set down in the crew handbook

SUB-SECTOR: ANCILLARY SERVICES
AREA : BUNKERING

BUNKERING RIGGER (LEVEL 1)

The Bunkering Rigger is designated to identify bunker samples. The personnel have to identify bunker amount. As a Bunkering Rigger, he/she is assigned to adhere bunker bunkering point, adhere mode via wharf and via barge. In terms of regulation and safety, he/she needs to comply all the safety standard, port regulation and also complying safety vessel requirement.

Responsibilities may include:

- Identify bunker samples
- Identify bunker amount
- Adhere bunker bunkering point
- Adhere mode via wharf
- Comply mode via barge
- Comply safety standard
- Adhere safety port regulation
- Comply to safety vessel requirement

Knowledge, Skills, Attitude

A Bunkering Rigger needs:

- to adhere to safety procedures and policies set down in the crew handbook.
- the ability to perform comfortably in a fast-paced deadline oriented work environment
- the ability to follow direction and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: ANCILLARY SERVICES
AREA :BUNKERING

BUNKERING PUMPMAN (LEVEL 2)

The Bunkering Pumpman is responsible to perform condition-based monitoring and general maintenance actions. The personnel is assigned to carry out liquid transfer pumps, valves, strainers, deck machinery and piping and participate in casualty drills, fire drills, collision and evacuation drills. He/she also perform minor engineering duties and perform mechanical actions as assigned. In addition, he/she is responsible to assist superior in repairing and rebuilding valves, fittings, pumps, glands and stuffing tubes.

Responsibilities may include:

- Carry out liquid transfer pumps, valves, strainers, deck machinery and piping
- Perform condition-based monitoring and general maintenance actions
- Perform minor mechanical duties
- Perform minor engineering duties as assigned
- Assist in monitoring and maintains well pressurization
- Assist in repairing and rebuilding valves, fittings, pumps, glands and stuffing tubes
- Participate in casualty drills, fire drills, collision and evacuation drills

Knowledge, Skills, Attitude

A Bunkering Pumpman needs:

- to have knowledge of safety and emergency procedures, including emergency evacuation procedures
- to have technical skills
- to be good at problem solving
- to have analytical skills
- to have familiarity with equipment maintenance
- the ability to work in a team

SUB-SECTOR: ANCILLARY SERVICES
AREA : BUNKERING

BUNKERING SUPERVISOR (LEVEL 3)

The Bunkering Supervisor is designated to confirm bunker type and bunker amount. As a bunkering supervisor, he/she is assigned to confirm bunker price, confirm delivery time and confirm the accuracy and completeness of the documentation. In terms of regulation and safety, the personnel need to adhere all the international safety standard, port regulation and also comply to vessel requirement safety.

Responsibilities may include:

- Confirm bunker type
- Confirm bunker amount
- Confirm bunker price
- Confirm bunker delivery time
- Ensure documentation accuracy and completeness
- Adhere to safety international standards
- Adhere to port regulations
- Comply to vessel requirement safety

Knowledge, Skills, Attitude

A Bunkering Supervisor needs:

- to adhere to safety procedures and policies set down in the crew handbook.
- to have documentation skills
- to work well under pressure while being detail oriented
- the ability to perform according to deadline oriented work environment
- the ability to provide instructions and to effectively complete tasks in a timely and safe manner

SUBSECTOR: ANCILLARY SERVICES
AREA : WASTE DISPOSAL

WASTE DISPOSAL RIGGER (LEVEL 1)

The Waste Disposal Rigger is designated to identify types of waste and confirm the waste quantity. The personnel has to determine waste disposal point and waste receptacle type. In order to carry out the task, he/she has to adhere to the regulations provided by port and local bodies. In terms of documentation, the rigger needs to assist her/his superior in ensuring that all the documentations are complete and correct.

Responsibilities may include:

- Identify types of waste
- Identify waste quantity
- Identify waste disposal point
- Identify waste receptacle type
- Adhere to port regulations
- Adhere to local bodies regulations
- Assist in completing checklist

Knowledge, Skills, Attitude

A Waste Disposal Rigger needs:

- the ability to work as part of a team
- to able to read and write
- the adhere to safety procedures and policies in the crew handbook.
- the ability to follow instructions and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: ANCILLARY SERVICES
AREA : WASTE DISPOSAL

WASTE DISPOSAL EQUIPMENT OPERATOR (LEVEL 2)

The Waste Disposal Equipment Operator is designated to determine types of waste and the waste quantity. The personnel have to determine waste disposal point and waste receptacle type. In order to carry out the task, he/she has to adhere to the regulations provided by port and local bodies, ensure checklist completeness and follow signage instructions.

Responsibilities may include:

- Determine types of waste
- Determine waste quantity
- Determine waste disposal point
- Determine waste receptacle type
- Adhere to port regulations
- Adhere to local bodies regulations
- Comply to documentation authorities
- Ensure checklist completeness
- Follow signage instructions

Knowledge, Skills, Attitude

A Waste Disposal Equipment Operator needs:

- to have documentation skills
- to work well under pressure while being detail oriented
- the ability to work as part of a team
- the adhere to safety procedures and policies set down in the crew handbook
- the ability to follow instructions and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: ANCILLARY SERVICES
AREA : SHIP CHANDLING

SHIP CHANDLING CARGO HANDLER (LEVEL 1)

The Ship Chandling Cargo Handler is designated to identify material types and identify the quantity of material. The personnel also need to identify delivery point at the wharf and at anchorage as well.

Responsibilities may include:

- Identify types of material
- Identify material quantity
- Assist delivery at wharf
- Assist delivery at anchorage

Knowledge, Skills, Attitude

A ship handling cargo handler needs:

- the ability to work as part of a team
- the ability to follow instructions and to effectively complete tasks in a timely and safe manner.
- to adhere to safety procedures and policies set down in the crew handbook.

SUB-SECTOR: ANCILLARY SERVICES
AREA : SHIP CHANDLING

SHIP CHANDLING EQUIPMENT OPERATOR (LEVEL 2)

The Ship Chandling Equipment Operator is designated to determine types of material, material quantity and determine who the suppliers for the materials are. The personnel is also responsible to carry out delivery at wharf and at anchorage and assist in documentation according to port services organisation procedures.

Responsibilities may include:

- Determine types of material
- Determine materials quantity
- Determine material suppliers
- Carry out delivery at wharf
- Carry out delivery at anchorage
- Assist in documentation

Knowledge, Skills, Attitude

A Ship Chandling Equipment operator needs:

- the ability to work as part of a team
- to have documentation skills
- to work well under pressure while being detail oriented
- to adhere to safety procedures and policies set down in the crew handbook.
- the ability to follow instruction and to effectively complete tasks in a timely and safe manner
- to comply to port services organisation procedure

SUB-SECTOR: ANCILLARY SERVICES
AREA : SHIP CHANDLING

SHIP CHANDLING SUPERVISOR (LEVEL 3)

The Ship Chandling Supervisor is designated to confirm types of material, material quantity and who are the suppliers for the materials. The personnel is also responsible to confirm delivery point at wharf and at anchorage. Execute documentation corrections and ensure documentation accuracy are among his/her responsibilities. In order to complete all the tasks, the personnel has to comply the documentation authorities and signatories.

Responsibilities may include:

- Confirm types of material
- Confirm materials quantity
- Confirm material suppliers
- Confirm delivery point at wharf
- Confirm delivery point at anchorage
- Supervise delivery activities
- Perform documentation corrections
- Ensure documentation accuracy

Knowledge, Skills, Attitude

A Ship Chandling Supervisor needs:

- to have documentation skills
- to work well under pressure while being detail oriented
- to adhere to safety procedures and policies set down in the crew handbook.
- the ability to work as part of a team
- the ability to guide subordinates and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: ANCILLARY SERVICES
AREA : LASHING

LASHER (LEVEL 1)

The Lasher is responsible to identify vessel types. The personnel need to identify vessel bay plan, vessel lashing plan and vessel total exchange. Also, he/she is assigned to carry out vessel loading & discharge sequence. The lasher also has to identify lashing materials type, lashing materials quantity and lashing materials location identification. Additionally, he/she needs to identify container type. The personnel need to adhere to vessel Estimated Time of Arrival, Estimated Time of Departure (ETA/ETD).

Responsibilities may include:

- Identify vessel types
- Identify vessel bay plan
- Identify Vessel lashing plan
- Identify Vessel total exchange
- Identify types of lashing materials
- Identify lashing materials quantity
- Identify lashing materials location
- Identify container type
- Carry out vessel loading & discharge sequence

Knowledge, Skills, Attitude

A Lasher needs:

- to adhere to vessel Estimated Time Of Arrival, Estimated Time Of Departure(ETA/ETD)
- to adhere to vessel berthing point
- to adhere to safety procedures and policies set down in the crew handbook.
- knowledge about vessels
- ability to follow direction and to effectively complete tasks in a timely and safe manner

SUB-SECTOR: ANCILLARY SERVICES
AREA : LASHING

LASHING FOREMAN (LEVEL 2)

The Lashing Foremen is responsible to determine vessel types, vessel bay plan, vessel lashing plan and vessel total exchange. He/she is also assigned to assist in vessel loading & discharge sequence confirmation. The Lashing Foreman also has to confirm lashing materials type, lashing materials quantity and lashing materials location. Additionally, he/she needs to confirm container type. The personnel need to adhere to vessel ETA/ ETD. Additionally, he/she needs to ensure document accuracy and completeness.

Responsibilities may include:

- Determine vessel types
- Determine vessel bay plan
- Determine Vessel lashing plan
- Confirm Vessel total exchange confirmation
- Confirm vessel loading & discharge sequence
- Confirm lashing materials type
- Confirm lashing materials quantity
- Confirm lashing materials location
- Determine container type
- Ensure document accuracy
- Ensure documentation completeness.

Knowledge, Skills, Attitude

A Lashing Foreman needs:

- to have documentation skills
- knowledge about vessels
- ability to follow direction and to effectively complete tasks in a timely and safe manner
- to adhere to safety procedures and policies set down in the crew handbook
- to adhere to vessel ETA/ETD
- to adhere to vessel berthing point

SUB-SECTOR: ANCILLARY SERVICES
AREA : LASHING

LASHING SUPERVISOR (LEVEL 3)

The Lashing Supervisor is responsible to confirm vessel types. He/she needs to confirm vessel bay plan, vessel lashing plan and vessel total exchange execution. He/she is also assigned to supervise vessel loading & discharge sequence, confirm lashing materials type, lashing materials quantity and lashing materials location confirmation. The personnel need to confirm container type. Additionally, he/she needs to check document accuracy and completeness. He/she also has to confirm manpower workable shift**.**

Responsibilities may include:

- Determine container type
- Confirm vessel types, vessel bay plan, vessel lashing plan and vessel total exchange calculation
- Confirm lashing materials type confirmation, lashing materials quantity confirmation and lashing materials location
- Confirm number of manpower
- Confirm work shifts
- Supervise vessel loading & discharge sequence
- Comply document accuracy
- Comply documentation completeness

Knowledge, Skills, Attitude

A Lashing Supervisor needs:

- to have documentation skills
- to adhere to safety procedures and policies set down in the crew handbook.
- knowledge about vessels
- the ability to follow direction and to effectively complete tasks in a timely and safe manner