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An analysis of human resources performance of Tanjung Priok container terminal

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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**AN ANALYSIS OF HUMAN RESOURCES
PERFORMANCE OF TANJUNG PRIOK
CONTAINER TERMINAL**

By

AGUS SUDARMAJI
The Republic of Indonesia

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

in

PORT MANAGEMENT

1999

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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DEDICATION

To my mother and father,
who built the first port in my heart
to where I always berth my ship
containing all my failures and
humble accomplishments.

So verily along with a difficulty there always be ease.

QS. Alam Nasyrah (94): 5

*When we were learning to read we were not satisfied
until we could recognize the limited number of letters of the alphabet
in all the various words in which they occurred
we did not think them beneath our notice in large words or small,
but tried to recognize them everywhere on the grounds
that we should not be literate till we could.*

Plato, the Republic

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ABSTRACT

Title : An Analysis Of Human Resources Performance of Tanjung Priok Container Terminal
Degree : MSc

This study is intended to provide an analysis of the performance of human resources (HR) of Tanjung Priok Container Terminal which is situated in Jakarta, Indonesia. The study is important not only to measure the HR performance but also to evaluate the effectiveness of performance management and HR management system.

The study is organized in five activities namely defining HR performance, selecting performance indicators, analyzing the collected data, making judgement on the level of HR performance, examining the judgement and proposing some programs to improve the performance.

The performance indicators selected in this study are workforce availability and utilization which are adopted with some adaptation from the common indicators in use to measure port performance. The data analyzed is the HR performance records from 1994 to 1998 with some exception in 1997 and 1998 due to the impact of the Asian crisis to the terminal's production. The analysis found that although the HR performance has been improving for the last five years, it is not yet up to standard.

The Three Levels of Performance approach is used to examine the possible causes of the sub-standard performance. A number of critical dimensions of HR performance are found in the organization level, process level and job/performer level. Based on this finding the study proposes some programs to improve the HR performance that are formulated in a package since they are closely related to each other. There are two alternative packages according to the modes of implementation, namely the adaptive change package and the total change package. The terminal privatization exists as a special consideration of program implementation.

Key words: performance indicators, job performance standards, the Three Levels of Performance, critical dimensions, privatization, the adaptive change package and the total change packages.

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LIST OF ABBREVIATION

ACP	=	The Adaptive Change Package
BOR	=	Berth Occupancy Ratio
BPP	=	Badan Pengusahaan Pelabuhan
CFS	=	Container Freight Station
CI	=	Containerisation International
CY	=	Container Yard
ECT	=	Europe Combine Terminal
ED	=	Engineering Department
EDI	=	Electronic Data Interchange
HMC	=	Harbor Mounted Crane
HR	=	Human Resources
HRD	=	Human Resources Development
HRM	=	Human Resources Management
IBW	=	Indonesia Business Watch
IPC II	=	Indonesia Port Corporation II
JICT	=	Jakarta International Container Terminal
LCL	=	Less than container load
Perumpel	=	Perusahaan Umum Pelabuhan
PGAD	=	Personnel and General Affairs Division
PKP	=	Penilaian Karya Pegawai
PT	=	Perseroan Terbatas
PTC	=	Port Training Center
PTP	=	Port of Tanjung Priok
R & D	=	Research and Development
Rp.	=	Rupiah

ST	=	Service Time
TCP	=	The Total Change Package
TEU	=	Twenty-Foot Equivalent Unit
TIP	=	Time in Port
TPCT	=	Tanjung Priok Container Terminal
TRT	=	Turn Round Time
RMPM	=	Rotterdam Municipal Port Management
UNCTAD	=	The United Nations Conference on Trade and Development
US \$	=	United States of America Dollar
UTPK	=	Unit Terminal Peti Kemas
WT	=	Waiting Time
YOR	=	Yard Occupancy Ratio

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CHAPTER ONE INTRODUCTION

1.1. Overview

The Tanjung Priok Container Terminal is situated in Jakarta, the capital city of Indonesia. As shown in Figure 1 the terminal is surrounded by some other ports in the three main islands, Sumatra, Java and Kalimantan. The terminal has experienced an uninterrupted growth in its TEU through-puts over the past decade. Together with the Tanjung Perak Container Terminal, situated in Surabaya, the terminal handled 2.9 million TEU, up to massive 130% on 1990's level (Bascombe, 1998). Table 1 shows the 1997 Major Terminal Operating Authorities where Indonesia Port Corporation becomes on the first rank among the terminal operators listed by the Containerization International magazine. (CI, May 1998).

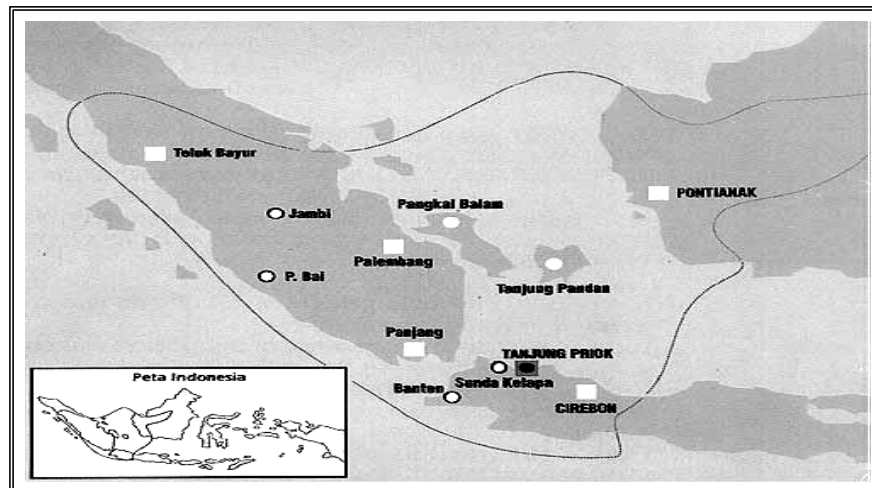


Figure 1. Map of the Port of Tanjung Priok Location

It is targeted that by the year 2000 the Tanjung Priok Container Terminal (TPCT) will solely handle 2.5 million TEU. The target was set due to the fact that the annual traffic trend to the port of Tanjung Priok is constantly increasing at 12%. The target seems to be achievable on condition that the terminal maintains or even improves its performance and productivity. Another fact is that the terminal serves the most rapid growing hinterland in Indonesia. Jakarta and West Java have a number of industrial estates where important contributors to the economy of the country are located. In the future the terminal will play a more important role in supporting the development of the region and the country.

Table 1. MAJOR OPERATING PORT AUTHORITIES

Terminal Operator	Ports	1997 TEU total Throughput	Total theoretical capacity by 2005
Indonesia Port Corporation	Tanjung Priok, Tanjung Perak	2.90	4
Dubai Port Authority	Port Rashid, Jebel Ali	2.60	3.6
Sri Lanka Ports Authority	Colombo	1.90	3
Portnet	Cape Town, Durban, East London	1.50	2.5
Virginia Port Authority	Norfolk, Newport News, Portsmouth	1.20	2
South Carolina State Ports	Charleston	1.10	2
Le Havre	Le Havre	1.02	2
Houston Port Authority	Houston, Galveston	0.85	1.5
Israel Port Ports and Harbors	Haifa, Eilat, Ashdod	0.80	2
TCCD	Bandima, Mersin, Haydarpasa, Izmir	0.73	1.5

Notes: All throughput figures on the third column are based on total throughput of facilities involved (in million TEU); the capacity listed on the last column is as at March 31, 1998)

Source: *Containerisation International, May 1998*

The current achievement of the terminal is attained by optimally utilizing all available resources, namely physical, financial and human resources. As indicated by Chen (1999) a container terminal is a system which is composed of a number of sub-systems that are interdependent to each other. The performance of the terminal is influenced by the efficient operations of all sub-systems. It is improper to say that only

a particular resource determines the success of the terminal, the physical and financial resources in particular. Therefore, it is essential to study all resources of the terminal.

1.2. Identification of Problems

It is an unfortunate that so far most analyses are addressed to examine the significance of physical and financial resources in supporting the high performance of the terminal. If people talk about a port or terminal performance it means that their analysis will mostly be about physical and financial performances of the terminal based on how optimal it utilizes those two kinds of resources. Another important resource that seems to be obtained a minor attention in those studies is human resources (HR).

Some researchers report that together with other resources, human resources contribute to the success of every business organization including ports. Following this report a question comes up, how significant is the HR contribution to the terminal performance? This paper is intended to conduct an analysis in order to answer this question. The analysis will also answer the following questions:

1. What problems do exist in relation to the HR performance?
2. What factors affect the HR performance?
3. How to improve the HR performance?

1.3. The Importance of the Analysis

The analysis has three main important implications, namely operational implication, management modeling and discourse contribution. Firstly, the study will provide some suggestions in order to improve the productivity of the terminal operation. It is because the research is designed to explore the problems concerning HR performance and their causes. Based on this finding, the terminal will be able to establish a sound HR

performance improvement program. This program will in turn enable the terminal to improve its overall performance by strengthening its competitive advantages.

Secondly, since its early establishment the Tanjung Priok Container Terminal has been a container terminal development model in the country. It is mainly because the terminal is the oldest and biggest container terminal. The other container terminals, such as Tanjung Perak in Surabaya, Panjang in Lampung (South Sumatra) and Pontianak (West Kalimantan) have developed their systems after studying the system and technology deployed in Tanjung Priok. The finding of this study will be useful not only for Tanjung Priok but also for the other surrounding container terminals.

Thirdly, the result of this study will enrich the discourses on port management and human resources management in the transport sector. The model of analysis could be examined and compared with other models in order to find the sufficient model to be implemented in a broader scope of study. The result is expected to motivate further research on this field to occur.

1.4. Dissertation Objectives

The objectives of the study are as follows:

1. To examine the human resources performance of the Tanjung Priok Container Terminal (TPCT)
2. To describe the main features of HR performance management of the terminal
3. To identify problems related to the human resource (HR) performance
4. To identify factors that affect HR performance
5. To use a certain tool in analyzing (HR) performance
6. To propose some recommendations to improve (HR) performance

1.5. Research Methodology

In collecting the necessary data and information, this research applies the following methods:

1. Interviewing a number of key persons in TPCT and its mother organization.
2. Collecting secondary data and information that is available in TPCT database.
3. Conducting literature research on the terminal's library, other institutions related to the main service of the terminal, the WMU library, the Malmö City library, Internet and other possible sources.
4. Consultation with experts at WMU and at some European ports which are visited during field study to gain the necessary information and to confirm the process of analysis.

The basis of the analysis is the Three Performance Level approach from Rummler and Brache (1989). Time serial analysis is also used to compare the collected data from a certain period of time.

1.6. The Limitation of the Analysis

The analysis is focused on the examination of the existing performance of human resources of the terminal. Due to this focus, the discussion is limited only to the HR performance and is not expanded to higher levels of performance. Therefore, the data to be analyzed in this paper is only the data which is directly related to HR performance.

1.7. The Organization of the Dissertation

The dissertation is organized into six chapters to facilitate the attainment of its main objectives. Chapter One discusses the basic information about the study that includes

background, importance of the study, research methodology, limitation of analysis and its organization.

Chapter Two describes the profile of the Tanjung Priok Container Terminal. Firstly, it discusses the physical descriptions and historical background of the terminal in particular and containerization in Indonesia in general. Secondly, it describes the hinterland that is served by the terminal. Thirdly, it explains the services provided by terminals. A figure about current facilities and equipment of the terminal is provided in this chapter.

A discussion about human resource performance would be meaningless without taking into account the basic concept of human resource and performance. So that, Chapter Three provides a brief overview about those two concepts in order to maintain the previous and further chapters as an integrated discussion. The first part of this chapter is about a definition of human resource and its significance to an organization. Performance and its dimension are the second part. The rest of this chapter will be about a model of analysis to be applied in this discussion. It will introduce the *Three Level of Performance* approach and presents the nine performance variables that determine the effectiveness and efficiency of the organization performance. This model is applied in evaluating the human resources performance of the organization. Some performance indicators that are commonly used by port operators in measuring their performance and productivity will be described.

The main analysis and evaluation will be done in Chapter Four and Five. Chapter Four examines the performance of human resources of the terminal based on the last five years data collected from the terminal and the IPC II Head Office's database. The chapter will be commenced by a brief description of the terminal organization and labor management. Two performance indicators are chosen to measure the level of performance namely labor force availability and utilization. The

closing part is a discussion about judging performance level by comparing the actual achievement with some standards setup by the management of the terminal.

Chapter Five discusses what factors determine the HR performance. Firstly it identifies the probable critical dimensions of the performance by using *The Three Levels of Performance* model. Secondly, some programs will be proposed to improve the HR performance. The programs are formulated in two modes of implementation in the current situation of the terminal.

Chapter Six will close the discussion by giving a conclusion and recommendations for further actions. The recommendation will be presented in two forms, namely the implication for practice and the implication for research.

CHAPTER TWO A PROFILE OF TANJUNG PRIOK CONTAINER TERMINAL

The Tanjung Priok Container Terminal (TPCT) is situated in Jakarta bay, at the northern coast of Java. Its position is 106°52' E and 6°6' S of the capital city of Jakarta. With its strategic position in between two oceans, the Indian Ocean and the South China Ocean, and two continents, Asia and Australia, the terminal plays a strategic role in the Indonesian national economic development.

2.1. Physical Characteristics

The port is characterized by a sand channel of 8000-m in length and 11-12.9-m in depth. The tidal characteristic of the port is 60 cm of low water (ZO); the mean range at spring tides (MHWS) is 86 cm and 26 cm at stand tide; ebb tides are daily solitary and time indication is GMT+ 07.00.

The maximum speed of the current is about 1 knot with 50' direction at low tide and 230'' at high tide. The average wave's height is 1 m and the highest point at approximately of 3 m during November to March. Maximum speed of the west monsoon is about 2 knot/hr in November – April and the east monsoon with the similar speed is from May to October. The temperature is 27° C on average with humidity between 80-90/o (IPC II, 1999).

2.2. Historical Background

Discussion about historical background of the terminal can not be simply separated from the history of the Tanjung Priok Port. The port is the biggest port in Indonesia and situated in the northern coast of the capital city of Jakarta. It is operated by Indonesia Port Corporation (IPC) II. The port is the Indonesian main gateway to the national and international economies. IPC II, as the operator, is a state-owned company, which has been assigned by the Indonesian government to run day-to-day management of the port since 1992.

There are three main units of organization located at Tanjung Priok port area which belong to IPC II, namely the IPC II Head Office, the Tanjung Priok Conventional Terminal and the Tanjung Priok Container Terminal. The IPC Head Office holds the central management function of the port within the western Indonesia region. The Tanjung Priok Conventional Terminal handles non-containerized cargoes, such as, general cargo, break bulks, grain, scraps and passengers as well. The specialization of Tanjung Priok Container Terminal (TPCT) is in handling containers of all kinds, such as standard containers, tank containers and reefer containers.

The Tanjung Priok Container Terminal was firstly operated on 7 December 1978 under the management of Badan Pengusahaan Pelabuhan (BPP) or the Port Authority. The embryo of the terminal was a terminal situated on the eastern side of the Tanjung Priok Port built in 1974 to serve container vessels. Although not all facilities had been finished in construction, the management decided to commence its service as a try-out. The construction was completely finished in 1981 and the official launching of the terminal was done by the President of the Republic of Indonesia on 20 May.

In 1983 the Indonesian government issued the Decree No. 11 and No. 15 as a basis of organizational transformation of the terminal operator from BPP, which was a fully public entity, to be a more commercially-oriented organization called Perusahaan

Umum Pelabuhan Indonesia II or Perumpel II. Perumpel II that since then operated the terminal still held a governmental function as a port authority on the one hand and a commercial function as a business organization on the other hand. The board of management of Perumpel II assigned the Branch Port of Tanjung Priok to run day-to-day management and operation of the terminal (TPCT, 1997). The Branch Port of Tanjung Priok is one of twelve commercial ports under the management of Perumpel II.

As the container traffic increased steadily, a need to set up an organization, which would be independent from the Branch Port of Tanjung Priok, emerged significantly. In 1990 the Board of Management of Perumpel II decided to establish The Tanjung Priok Container Terminal management as a new unit of organization under its auspices. Since then it has been enjoying an equal status to its older sister as a daughter organization of Perumpel II and directly responsible to Perumpel II's Board of Management.

Due to its outstanding performance, the Perumpel II was promoted to be a *persero* or a state-owned company in 1992 and since then it holds a name of PT. (Persero) Pelabuhan Indonesia II (IPC II, 1997). A *persero* is the least-subsidized state-owned enterprise. A *persero* enjoys a more deregulated business atmosphere to strengthen its role in generating income to the state. As the consequence of the promotion, the IPC II was demanded to improve its performance.

A number of improvement programs have been conducted in all units under IPC II Board of Management's control. The programs have been giving significant results to the ports particularly to the terminal performance. For the last few years the terminal has been the main contributor to the IPC's income compared with other branch ports, which is about 20% of the total income.

2.3. The Hinterland and Its Connections

The terminal serves a hinterland which is the most rapid growing region of the country spreading from the utmost western side of Java Island until the border of Central Java province. The western part of the hinterland are mainly industrial areas situated in Merak, Cilegon and Tangerang. The central part to the eastern part of it are also industrial areas situated in Jakarta and Bekasi. Bekasi also has plantations that produce rubber and other commodities. Some plantation areas that produce tea, rubber, rice, fruit and other commodities are also located in the southern part of the hinterland beginning form Cibinong, Bogor, Sukabumi, Cianjur until Bandung (Port of Tanjung Priok, 1997).

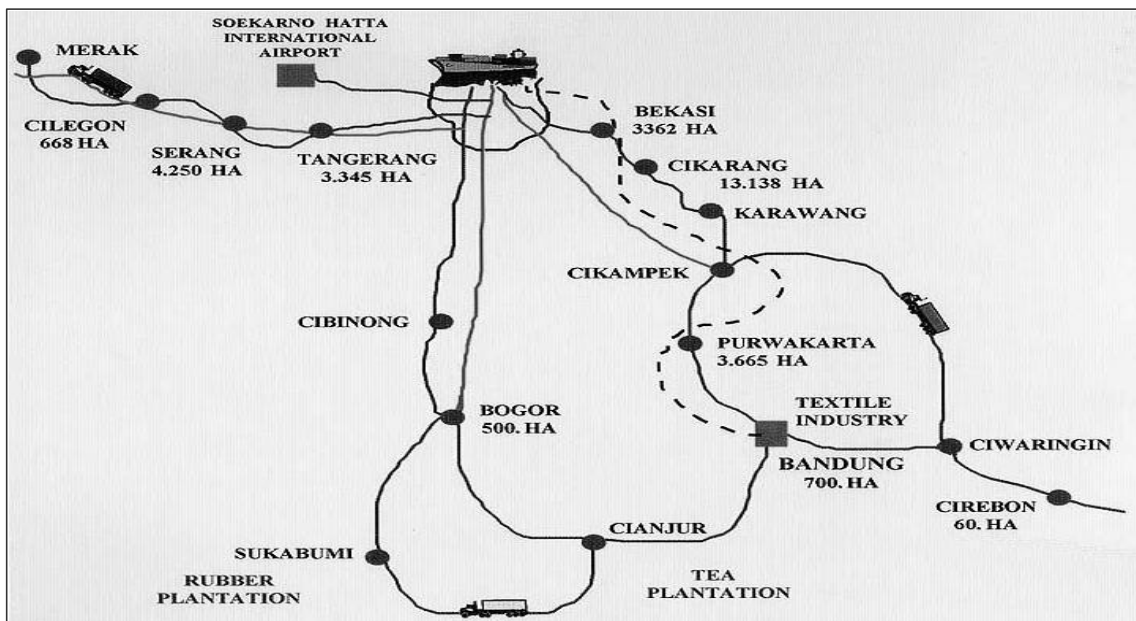


Figure 2. Map of Hinterland

The terminal is connected to its hinterland by road and railway systems as shown in Figure 2. Since the 1980s there have been three main access roads to the terminal from the eastern, western and southern parts of the hinterland. The Cakung-Cilincing highway connects the terminal to the industrial estate on the eastern side of

the terminal. The connection to the southern side is done via the Jagorawi highway. And the last-built connection to the western site is the Serang-Ancol highway. Those three highways provide a more convenient flow of cargo by means of avoiding traffic congestion in towns.

A railway connection is dedicated to transport a number of particular commodities between the terminal to the inland port of Gedebage in Bandung, the capital of the Western Java Province. The railway service is provided by a railway state-owned company called Perumka. Most cargoes transported between the two points are cement products in containment.

2.4. Terminal Facilities and Equipment

TPCT has three main service bases namely Terminal I, Terminal II and Pasoso Terminal. Terminal I is the oldest and the main service base which is located in the eastern side of TPCT. The word “terminal” used here could be misleading because in reality it does not stand as an independence organization that runs its operation separated from TPCT management. The terminology is used by tradition for the sake of simplicity. The main income of TPCT comes from this terminal.

Terminal II is situated in the western side of TPCT. It was firstly operated in 1991 to anticipate the rapid increase of container traffic. Originally it was a conventional berth and some sheds before converted to be a container terminal. In the same year of its launching, the government issued the Decree No. 5/1991 which regulates the organizational change of the Port Authority (TPCT, 1998).

The third service base is operating the Pasoso Terminal which is a container freight station (CFS). The CFS is situated on the southern side of the two terminals and close to the gate (out). It was build to meet the clients' needs for cargo consolidation.

Table 2. Facilities and Equipment of the Terminal

	TERMINAL I	TERMINAL II	C F S	TOTAL
1. Berth				
Length	900 m	510 m	-	1,410 m
Apron width	27 m	16 m	-	-
Draft	11 m	8.6 m	-	-
2. Yard				
Land Area	31.40 Ha	6,83 Ha	1.50 Ha	39.73 Ha
Import capacity	18,900 TEUs	4,999 TEUs	357 TEUs	24,556 TEUs
Export capacity	8,905 TEUs	2,400 TEUs	357 TEUs	11,662 TEUs
Reefer capacity	240 plugs	48 plugs	-	288 plugs
3. C F S				
Area			4,500 sqm	4,500 sqm
4. Equipment	(in units)	(in units)	(in units)	(in units)
Gantry Crane	8	5	-	13
HMC	4	1	-	5
Transtainer	31	13	-	44
Forklift	13	7	9	29
Head truck	59	15	-	74
Chassis	66	18	-	84

In order to provide a reliable service, the terminal is equipped with necessary facilities which are shown in Table 2. In its initial operation in 1978 it had only two units of gantry cranes, two units of transtainers and a container yard with a holding capacity of 4 (four) ha.

2.5. System of Operation

In regard of cargo handling equipment, the terminal operation system could be categorized as a transtainer relay system (UNCTAD, 1986). In this system, the containers are relayed between the ship-to-shore gantry cranes and the stacking area by yard truck/trailers. The transtainers pick up the containers from the roadway and move along the rows to stack them while the trucks with their trailers move off around

the container yard and back to the quay apron. The transtainers also transfer containers between their stacking position in the CY and inland transport at the 'grid' receipt/delivery position.

Beside transtainers, the terminal also uses harbor-mounted cranes (HMC) to transfer the containers between roadway and quay apron. Due to its few numbers, the HMC are not very much in use and trainstainers seem to be more mobile and productive than them.

In CFS, the equipment in use are forklifts that vary in capacity. After being stripped and stuffed in the CFS the containers are moved by forklifts to the truck/trailers. The truck/trailers then move them to CY or out of the terminal.

The normal service of the terminal is 24 hours a day and seven days a week. Clients could get any information about ships' arrival and departure and containers' positions only by contacting Hotline Service without direct-physical check to the terminal. Document clearance is done as quickly as possible. In order to improve its service, the terminal has been implementing Electronic Data Interchange (EDI) since 15 September 1997. At its first start, the EDI was also used by 17 shipping lines, 19 importers companies, 14 banks and the Customs (TPCT, 1998). The terminal also provides a Help Desk to assist all clients particularly those who have not implemented EDI yet.

2.6. Summary

This chapter gave a brief description of the terminal profile containing physical characteristics, historical background, hinterland and its connections, terminal facilities and system of operation. This will be followed by a question on what manpower requirement it has to meet the operational and management needs. The following chapters will elaborate this subject.

CHAPTER THREE

A THEORETICAL OVERVIEW OF HUMAN RESOURCES PERFORMANCE

3.1. Three Types of Resources

An organization normally has three types of resources namely physical, financial and human resources (Gilley & Egglund, 1989). The success of the organization depends on how well it optimize all its resources.

Machines, materials, facilities, equipment and component parts of products are examples of physical resources, which are also called fixed assets. Physical resources are very important to the health of the organization because they provide it with stability and strength. They also provide the public with a measure of the organization's success because they are tangible and can be seen (Gilley, 1989). The public may simply judge how healthy an organization is by comparing the appearance of its headquarters building with others'.

Financial resources refer to liquid assets of an organization. They are all the financial components of the organization, such as cash, stock, bonds, investment, and operating capital. Financial resources, as physical resources, are important to the organization's ability to react to opportunities to growth and expansion. They also reflect its overall financial stability and strength. This is determined by comparing the assets (physical and financial) with the liabilities (debts) of the organization. A positive outcome is referred as net worth. Net worth is the figure that the banks, investors and the public use to determine the financial health of the organization.

Human resources refer to people employed by an organization. It is rather difficult to measure the value of human resources due to the insufficiency of traditional measurement to be used. Human resources cannot be depreciated as physical and financial resources. It could be misleading when corporate executives and managers overlook this fact, because human resources cannot be used to reflect the prosperity of the organization.

In addition to human resources, there are other kinds of terminology in use nowadays to refer to almost the same concept, such as personnel, employee, manpower, workers and laborers. This paper will use most of them interchangeably depending on the context.

3.2. The Importance of Human Resources

Cascio (1989) mentions that human resources play a vital role in any organization. This could be explained by observing how an employee performs his or her job. A job is normally designed for an individual as an integrated part of a bigger job which belongs to a unit or division within the organization. If an employee performed his or her job successfully, it means that he or she contributed something that enables his or her unit to achieve its goals or objectives successfully. The achievements of all units or divisions constitute an overall achievement of the organization. In other words, the success of the organization depends on the success of all employees in every unit or division in performing their jobs.

According to a survey done in 1979 of 2000 chief executives of top businesses and financial institutions, personnel matters are getting more and more important. About 40 percent of the respondents reported that they are devoting from 5 to 20 hours per week to work on personnel matters, a 15 percent increase from the previous 5 years (Labor Letter, 1979). This finding reflects how the modern organizations rely mostly on their human resource to be able to survive in this turbulent time.

In the transport and trade sectors human resources also attract more and more attention from all organizations that do business in the sectors. An outstanding proof in this regard is the Cartagena Commitment that was adopted by UNCTAD VIII (UNCTAD, 1993). The Cartagena Commitment, which contains several references to human resources development (HRD), highlights the necessity of every individual actor in the trade sector particularly in developing countries to adopt and develop its HRD policy. The need is underlined by recently initiated market-oriented trade policy reforms in most developing countries, including moves towards privatization and reform of public enterprises. Furthermore, it adds that domestic policy reforms have generated new additional human resource needs, both in the government and private sectors.

The maritime industry depends massively on those who work in the industry. This statement was addressed by Mr. O'Neil, the Secretary General of IMO, in the annual meeting of British Officers' Union, Numast at Harrogate. People are the key to everything. Regulations and standards were of no value unless implemented by human beings who staffed flag states, port states and ship owning companies and vessels. They depended on human resources quality, efficiency, zeal and enthusiasm (Osler, 1999).

All organizations need people therefore they could not function without people. Even on board of a highly sophisticated and fully computerized ship using less than 13 crewmembers, people are nevertheless required to coordinate and control the ship's operation. Conversely, people need organizations so that they can satisfy their needs, so they can maintain their standard of living by working in organizations, and so that modern society can continue to function (Cascio, 1986).

3.3. Performance and Its Measurement

3.3.1. Definition of Performance

After analyzing a number of American companies, Rummler and Brache (1989) indicate that in improving competitiveness against foreign competitors, performance is the underlying issue whether the concern is quality, customer focus, productivity,

cycle time, or cost. They conclude that most American managers have been unable to respond effectively to the challenges because they have failed to create an infrastructure for systemic and continuous improvement of performance. They believe that their shortcoming does not lie in the understanding of the problem, in the desire to address the problem, or in the willingness to dedicate resources to the resolution of the problem. Rather, the majority of managers simply do not understand the variables that influence organization and individual performance.

In order to anticipate what Rummler and Brache (1989) found, it is necessary to define the key word, performance. Cascio defines performance as an employee's accomplishment of assigned tasks (Cascio, 1989). Almost similar to it, Mitchell and Larson, Jr. (1987) define that performance refers to the results of behavior as judged against some criteria or standards of excellence.

Prof. Motowidlo (Azar, 1995) from the University of Florida at Gainesville prefers to separate job performance into two parts: task performance and contextual performance. This division takes into account the importance of personality and intelligence that give significant contribution in individual success. Task performance is the traditional notion of ability: how well workers perform and complete a specific task, e.g. a report written, a car washed, a product sold.

Contextual performance refers to aspects of performance unrelated to specific task – volunteering, putting in extra effort, cooperating, following rules and procedures, and endorsing the goals of the organization- which are equally important to job performance. His research indicates that task performance and contextual performance contribute independently to overall job performance.

The degree to which performance reflects behavior as indicated by Mitchell and Larson, Jr. (1987) varies in a number of ways, such as:

1. Performance may reflect the same behavior aggregated over time (e.g., a batting average).

2. Performance may reflect different behaviors aggregated to a “higher level” of conceptualization (e.g., attendance).
3. Performance may reflect outcomes that are not closely linked to specific actions (e.g., sales).
4. Performance may be defined in general terms that reflect global traits rather than specific behaviors (e.g., assertiveness, outgoingness).
5. Performance may be defined as the result of group rather than individual behavior (e.g., baseball games won, number of innovations produced by a research and development division).

Another issue indicated by Mitchell and Larson (1987) is the easiness degree of the criteria or standards to be translated into behavioral terms. Some organizations set performance evaluations that consist of personal checklists, based on subjective evaluations. An employee might be rated on how assertive, committed, and organized she or he is. This type of performance evaluation has a problem that these terms mean different things to different people- both raters and ratees.

Finally, Mitchell and Larson (1987) conclude that performance may reflect a team product. Supervisors are normally evaluated based on their units' performance, and it is often difficult to tease out individual contributions.

3.3.2. Selecting Performance Indicators

Selecting performance indicators is an important part of the process of measuring port performance. A performance indicator is not only useful for a port as a parameter to measure its own performance but also to compare it with the performance of other ports. The selection should be undertaken properly due to the fact that there are a number of indicators which vary depending the categories of cargo (UNCTAD, 1976). Performance indicators for a container terminal may differ from those used by a bulk or passenger terminal.

Talley (1986) indicates two methodologies to select performance indicators, i.e. the criteria specification methodology and the operating objective specification methodology. The criteria specification methodology specifies criteria that selected performance indicators must satisfy (Fielding & Glauthier, 1976). The operating objective specification methodology requires specification of port's operating objective(s) for the purpose of then selecting performance indicators (Talley, 1988). Performance indicators are choice variables (whose values are under the control of transit management) for maximizing or minimizing the port's operating objective(s).

The operating objective specification methodology seems to be suitable to be adapted in selecting port performance indicators. That is because the methodology is expected to address criteria that would likely be specified under the criteria specification methodology and it specifically addresses the conciseness criterion. The criterion is important for limiting the redundancy and overlap among selected indicators, which means to limit their numbers.

Talley and Anderson (1981) classify operating objectives of public transit firms, including ports, as either effectiveness or efficiency objectives. Effectiveness is concerned with how well the transit firms provide service to users or clients. Efficiency refers to how well the firms utilize their available resources. An example of effectiveness objective is maximizing cargo worked. Minimizing cost in the provision of service is an example of efficiency objective.

According to UNCTAD (1976, 1987), the most important indicators to measure and evaluate port performance are financial and operational performance indicators. Financial indicators are concerned with costs generated by port operations and revenues resulting from the operations. In other words, the financial indicators are to answer two fundamental questions: what revenue is produced from a service, and what the cost of the service is.

It is suggested that the port area should be divided into berth groups (or terminals) where each group handles a different cargo class. The primary financial indicator for a berth group is the contribution per ton of cargo handled over a

specified time period. To arrive at this indicator, the costs and revenues produced at the berth group are first calculated to indicate the portion of each element to the contribution. The elements to be considered for each berth group are:

- a. Ship revenue related to the berth group (terminal)
- b. Cargo revenue related to the cargo handling; services of the berth group
- c. Labor costs
- d. Capital equipment costs (including amortization, maintenance and operating costs).

The operational indicators are the second performance indicators which are of more direct concern to port management than financial ones. The quantity of cargo handled per ship hour in port with a high figure being desirable is an excellent indicator to maintain port effectiveness. To maintain this indicator, information on the arrival time, departure time and tons loaded/discharged for each ship must be recorded. The time of berthing, ship length and location of berthing should also be noted. In order to permit measurement of the intensity of working, data on the total hours at berth during which the ship was worked and on the total gross gang-hours worked should be recorded as an addition to the above information.

The following averages that obtained from those records can be calculated on a monthly basis for each berth group servicing a cargo class:

- a. Arrival rate
- b. Waiting time
- c. Service time
- d. Turn-round time
- e. Tonnage per ship
- f. Fraction of time berthed ships worked
- g. Number of gangs employed per ship per shift
- h. Tons per ship hour in port
- i. Tons per ship hour at berth
- j. Tons per gang-hour
- k. Fraction of time gangs idle.

The above discussion shows that labor is an important element of either financial or operational performance indicators. Does it mean that the performance of the terminal could be judged by evaluating its workforce performance? Could workforce performance be solely measured apart from other terminal resources' performance?

In answering these questions, Dowd and Leschine (1990) highlight the fact that the terminal productivity measurement is a means of quantifying the efficiency of the use of labor, equipment and land. Since the most general sense of terminal productivity is measuring output per unit of input, it would be worthwhile to link terminal productivity to labor cost. But instead of only using a quantitative measurement, a performance evaluation is also using a qualitative analysis. The purposes of using the both methods are to measure the level of the terminal labor performance and to evaluate the performance management system adopted by the terminal.

Talley (1994) identifies four indicators to measure labor performance used by Australian container terminal operators, namely number of employees, average age of total labor force, average hours worked per week and idle time percentages (the percentage of time employees are available for work but are not required to work). In addition, the Australian operators also adopt other indicators that mainly concern the utilization of resources, the amount of resources and port throughput (productivity).

As a conclusion, the indicators that will be used to evaluate labor force performance in this paper are:

1. The availability of workforce,
2. The utilization of workforce.

Another problem after selecting performance indicators is how to use those indicators to evaluate labor performance of the terminal. For the purposes of this paper, those indicators will be used to compare how significant the relationship between changes in labor force matters and its impact in improving terminal

performance is. The analysis will result in determining whether the labor performance is improving, stable or deteriorating (Talley, 1994).

3.4. The Three Levels of Performance

Rummler and Brache (1989) propose a model of performance analysis namely the Three Levels of Performance. This model is used as a framework and a set of tools that can substantively address the problem of performance, which is multidimensional. The model is established based on the evolution of Process Management that addresses the major variables in the system of organization that influences the quality, quantity, and cost of performance.

It is apparent that everything in an organization's internal and external "ecosystem" (customers, products and services, reward systems, technology, organization structure, etc.) is connected. To improve organization and individual performance, it is needed to understand these connections. The current mosaic may not present a very pretty picture, but it *is* a picture. The picture can be changed or enhanced only through a holistic approach that recognizes the interdependence of the Performance Variables. The way to understand these variables is through the application of the system view to Three Levels of Performance.

The system view or also called horizontal view is a way to view an organization as an adaptive system in which all its functions interface one to each other. It enables managers to see how work actually gets done, which is through processes that cut across functional boundaries. It shows the internal customer-supplier relationships through which products and services are produced. It is the starting point for designing and managing organization to the new reality of fierce competition and changing customer expectations.

The model as its name indicates has three levels of performance namely *organizational level, process level and job (performer) level*. The organizational level or Level I emphasizes the organization's relationship with its market and the basic "skeleton" of the major functions that comprise the organization. At Level I

there are a number of variables which affect performance, such as strategies, organization-wide goals and measures, organization structure, and deployment of resources.

The next set of critical variables that affect an organization's performance lie at what is called the Process Level. Suppose the organization's "body" to be put under a special X-ray, the skeleton of Level I and the musculature of the cross-functional processes that make up Level II will be seen. This level indicates workflow or how the work gets done. The organization produces its outputs through myriad cross-functional work processes. The organization is only as good as its processes. Managing the Performance Variables at the Process Level imposes the managers to ensure that processes are installed to meet customer needs, that those processes work effectively and efficiently, and that the process goals and measures are driven by the customers' and the organization's requirements.

As mentioned above, an organization produces its outputs through processes. Processes, in turn, are performed and managed by individuals doing various jobs. Still using X-ray illustration that being increased its power, the third Level of Performance, Job/Performer Level, which represents the cell of the body is now visible. Hiring and promotion, job responsibilities and standards, feedback, rewards, and training are some of the Performance Variables to be managed at this level.

The importance of this model identified by Rummler and Brache (1989) is as follows:

The Three Levels represents an anatomy of performance. The anatomy of the human body includes a skeletal system, a muscular system, and a central nervous system. Since all of these systems are critical and interdependent, a failure in one subsystem affects the ability of the body to perform effectively. Just as an understanding of human anatomy is fundamental to a doctor's diagnosis and treatment of ailments in a body, an understanding of the *Three Levels of Performance* is fundamental to a manager's or analyst's diagnosis and treatment of ailments in an organization.

3.4.1. The Nine Performance Variables

The Three Levels of Performance constitute one dimension of the model framework. Another dimension comprises three factors called Performance Needs that determine effectiveness at each level (and the effectiveness of any system):

1. Goals: every level needs specific standards that reflect customers' expectations for product and service quality, quantity, timeliness, and cost.
2. Design: the structure of the Organization, Process, and Job/Performer Levels needs to include the necessary components, configured in a way that enables the goals to be efficiently met.
3. Management: each level requires management practices that ensure that goals are current and are being achieved.

		THE THREE PERFORMANCE NEEDS		
		Goals	Design	Management
THE THREE LEVEL OF PERFORMANCE	Organization Level	Organization Goals	Organization Design	Organization Management
	Process Level	Process Goals	Process Design	Process Management
	Job/Performer Level	Job/Performer Goals	Job/Performer Design	Job/Performer Management

Table 3. The Nine Performance Variables

Table 3 shows the nine Performance Variables as a result of combining the Three Levels of Performance with the Performance Needs. These variables represent a comprehensive set of improvement levels that can be used by managers at any level.

Since the focus of the discussion in this paper is on human resources performance, the following discussion will elaborate the third level of performance, the Job/Performer Level.

3.4.2. The Job/Performer Level

The Job/Performer Level is so named because it looks at jobs and at the people who perform these jobs regardless of the level in the organization hierarchy. Performance can be improved only if jobs and performers are analyzed in an overall performance context. The goals, design, and management at the organization and process levels are part of the system that affects human performance. The human performance system builds on those levels by providing a more “micro” picture of people and of the immediate environment that surrounds them. As shown in Figure 3, the job/performer level reflects the input-process-output-consequence-feedback perspective that also underpins the organization and process level.

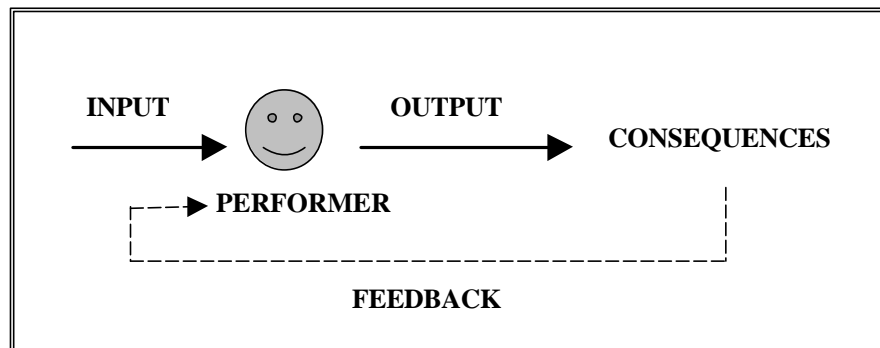


Figure 3. Human Performance System

Inputs are raw materials, forms, assignments, and customer requests that cause people to perform. The input package also includes the performers' resources and the systems and procedures that represent the performers' link to the Process Level. Salespeople, for example, have inputs that include leads, territory assignments, and market research information. Their resource inputs may include brochures, presentation aids, and product specifications. The salespeople, at last, are expected to follow the steps in the sales process.

Performers are the individuals or groups who convert inputs to outputs. Salespeople, sales managers, market researchers, and customers are all performers.

Outputs are the products produced by the performers as their contribution to the organization and process goals. People's traits, skills and knowledge, and behaviors are all important performance variables. However, they are all means to the end that justifies the performers' existence in the organization- the outputs. The key output of salespeople is the sales volume they produce.

Consequences are the effects experienced by performers either positive or negative when they produce an output. Bonuses, recognition, and more challenging work may be included in positive consequences, while negative consequences may appear as complaints, disciplinary sanction, and less interesting work.

Feedback is information that tells performers what and how well they are doing. Feedback can come from error reports, statistical compilation, rejects, oral or written comments, surveys, and performance appraisals. Sales people get feedback from customers (who buy or don't buy), from sales managers (who compile sales-performance information), and from the people who produce or deliver the product or service (who may comment on the quality of the sale).

Finally, Rummler and Brache (1989) highlight the quality of outputs, which is a function of the quality of inputs, performers, consequences, and feedback. At the job/performer level, analyses and improvements are addressed to the five human performance system components. The only way to comprehensively improve performance is from addressing each of the components.

3.4.3. The Performance Variables at The Job/Performer Level

Job/Performer Goals. Since the role of workers is to make processes work, it is necessary to make sure that their goals reflect process contributions. Job/performer

goals should be directly linked to functional goals and derived from the processes they support.

These goals communicate to performers what they are expected to do and how well they are expected to do it. These two ingredients specify the output component of the human performance system. Performers cannot fully understand the level of performance they are expected to attain without standards.

The purpose of job/performer goal setting is to ensure that job outputs and standards are linked to process requirements, which are in turn linked to customer and organization requirements.

Job Design. The next step after establishing the job/performer goals is to ensure that each job is structured to enable its incumbents to achieve these goals. Design is a function of allocation of responsibilities among jobs, sequence of job activities, job policies and procedures and ergonomics.

Job/Performer Management. Managing the job/performer level is managing the five components of the human performance system. The purpose of job/performer management is to put capable people in an environment that supports their accomplishment of job goals. In facilitating this purpose, six factors affect the effectiveness and efficiency of the system as follows:

1. Performance specification
2. Task Interference
3. Consequences
4. Feedback
5. Knowledge/skill
6. Individual Capacity

Factor 5 and 6 address the capability of the performers while factors 1 through 4 list the factors in a supportive environment (Rummler & Brache, 1989).

3.5. Summary

This chapter gave a brief theoretical overview as a basis of the HR performance evaluation in the next chapters. Two indicators have been selected to measure the performance namely workforce availability and utilization. The Three Levels of Performance will be used as an approach to examine the HR performance.

CHAPTER FOUR

HUMAN RESOURCES PERFORMANCE ANALYSIS

4.1. The Terminal Organization

As mentioned in Chapter Two, The Management of Tanjung Priok Container Terminal (TPCT) operates the terminal. Unlike the conventional terminal of Tanjung Priok Port, which operates as a tool port, the container terminal is more service port. TPCT does not only own the terminal and its cargo handling equipment but also runs all terminal operations. In this regard TPCT operates like a stevedoring company which is responsible for generating income for the port.

Its status as a service port imposes the terminal to provide workforce under its management to fill all available jobs. There are two types of employees of the terminal, organic and non-organic. The organic employees are those who have been officially hired by the terminal as permanent staff. Their employment life is not limited by a temporary contract but could reach the optimum age of 56. They hold structural, functional and operational jobs.

The non-organic workers are employed by a labor pool on a non-permanent contract basis. The labor pool is a daughter company of IPC II. The contract of employment varies from 1 to 5 years and could be extended if the terminal still requires these non-organic employees. This second type of workers mainly hold supporting jobs and never have opportunity to hold structural jobs. Due to the requirement of their jobs,

most of them are high school graduates even some of them only hold primary school certificates. In number they are few, not more than 5 percent of all the employees.

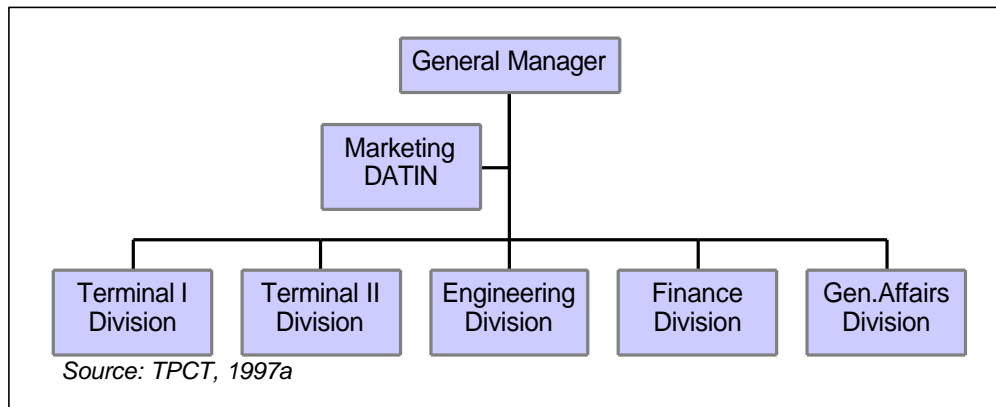


Figure 4.1. The Main Divisions

As shown in Figure 4.1, the terminal has five main divisions and a special unit named Marketing and Data/Information Unit that is directly under the supervision of the General Manager. Firstly, the Terminal I Division is responsible for operating Terminal I (east terminal). The second division is Terminal II Division which is responsible for operating Terminal II (west terminal) and CFS. The Engineering Division is the third division whose responsibility covers all technical and engineering work in the terminal. Financial matters such as budgeting, accounting and treasury are the responsibility of the Finance Division. The Personnel and General Affairs Division takes care of personnel and general affairs including housekeeping, security and safety, and legal aspects of the terminal operations. The Marketing and Data/Information Unit provides marketing service and data processing.

The organic employees are placed in the mentioned divisions based on their qualifications. According to the type of work, the employees are classified into three different groups, namely direct-operational, indirect-operational and supportive staff. Operational staff are those who work on the first front of terminal operations, such as

crane drivers, truckers and foremen. As the service of the terminal is open 24 hours a day and 7 days a week; they work in three shifts per day. Shift I is from 07.00 – 15.00, shift II from 15.00 – 23.00 and shift III from 23.00 – 07.00. In order to provide reliable work force, the management divides them into 4 groups which work interchangeably everyday. It means that there are three groups work in three shifts and one group remains free (off work). If staff members of Group I work in shift I today, they will be working in shift II tomorrow and so forth until come back again to the initial start. Normally all groups will have the same turn in every four days. Table 4.1 may give a clear illustration of this arrangement

**Table 4.1
Working Shifts Arrangement**

Position	Time	Day One	Day Two	Day Three	Day Four
Shift I	07.00 - 15.00	Group 1	Group 4	Group 3	Group 2
Shift II	15.00 - 23.00	Group 2	Group 1	Group 4	Group 3
Shift III	23.00 - 07.00	Group 3	Group 2	Group 1	Group 4
Off-work	----	Group 4	Group 3	Group 2	Group 1

Indirect-operational staff members are actually the administrative employees who are placed in the operational divisions. They do administrative jobs or all paper-works of the operational divisions. Their working time is from 08.00 to 17.00, from Monday to Friday. The composition of staff will be elaborated further in chapter four and chapter five.

Supportive staff are those who work to support the main production of the terminal such as engineers and mechanic staff in Technical Division and administrative staff in Personnel and General Affairs Division and Finance Division. They do not follow the shift system as applied to operational staff but work in normal daytime from 08.00 to 17.00. Some of them, particularly the engineering staff, do a watch-duty in nighttime. Each of the latter staff has his or her turn once a week. The watch-duty is

important to ensure that their service is always sustainable 24 hours particularly to anticipate emergency cases.

4.2. Workforce Availability

As mentioned in Chapter Three, the indicators to be used in evaluating human resources performances in this paper are workforce availability and utilization. Workforce availability explains how sufficient the available laborers to meet the demands of the operations. Workforce utilization indicates how well the available workers are utilized in achieving the operational targets.

The evaluation of workforce availability is addressed to both its quantity and quality. Due to its nature of operations, the container terminal requires a number workforce with a certain level of skills and competency. The terminal is totally dependent on high capacity, specialized and sophisticated handling equipment.

Operating and maintaining the equipment requires special skills (UNCTAD 1986c). Poor skills either in operating or maintaining the equipment will result in poor performance of the terminal. It is because the terminal is an integrated system that possesses operations consisting of a series of distinct but inter-dependent activities (Chen, 1999). Lack of skills of employees in a particular activity will cause problems not only in the point where the activity takes place but also in other points. Those activities are ship operations, quay transfer operations, storage operations and receipt/delivery operations. Another subsidiary activity is moving LCL containers from the container yards to CFS for unpacking and the empty boxes returned to the empties stack.

The new technology of handling equipment imposes the management of the terminal to employ labor force which are higher in skills and competency but fewer in number than those on conventional terminals (UNCTAD, 1986b). This becomes an important consideration to the terminal in recruiting new employees.

When providing required workforces, the terminal is still dependent on its mother organization, the IPC II Head Office, especially new recruits from external sources. Since 1992 the IPC Head Office has been adopting the zero growth policy. As its name indicates, the policy imposes the company to maintain the growth of its employees to remain stable at zero level at any time. It means that the number of new recruitment is just the same as the number of retirements. In other words, the number of those who come into is the same as who go out from the company. The policy also reflects the function of the company as a public enterprise that is obliged to provide employment to as many as possible people without victimizing its commercial objectives.

The IPC II Head Office supplies employees to the terminal based on its annual manpower plan. The supplies may consist of new recruits, that mainly for holding clerk jobs, and staff from other branches of the company for holding supervisor and manager jobs. The terminal is given authority for doing internal recruitment and placement for low level (blue-collar) employees. The latter recruitment is mainly done due to promotion or rolling staff from one job to another.

The following discussion about workforce availability will be focused on analyzing the workforce age structure, basic education structure, divisional placement, and job level structure. The available data ranges from 1994 to 1998.

4.2.1. Age Structure

The first parameter of workforce availability is the age structure that represents the demographic figure of the employees. By identifying the structure of employees' age, the management will be able to predict the future requirement of workforce and to set up a sound human resource management plan (UNCTAD, 1986b). The plan covers a wide range of activities from employees' recruitment, placement, training, and career development until retirement arrangement.

Based on the existing condition, the workforce age structure is broken down into five classes of age, as follows:

- Class ≤ 25 (years) : early employment
- Class 26 – 35 : productive age I
- Class 36 – 45 : productive age II
- Class 46 – 50 : age of maturity
- Class 50 < : declining age.

Table 4.2
Workforce Age Structure
1994 - 1998

No.	Age (years)	1994	1995	1996	1997	1998	Trend
1.	< 25	234	142	106	119	61	-25%
2.	26 - 35	401	443	476	485	492	5%
3.	36 – 45	446	463	494	472	500	3%
4.	46 – 50	134	149	146	147	168	6%
5.	50 <	10	4	10	16	8	25%
	Total	1225	1201	1232	1239	1229	

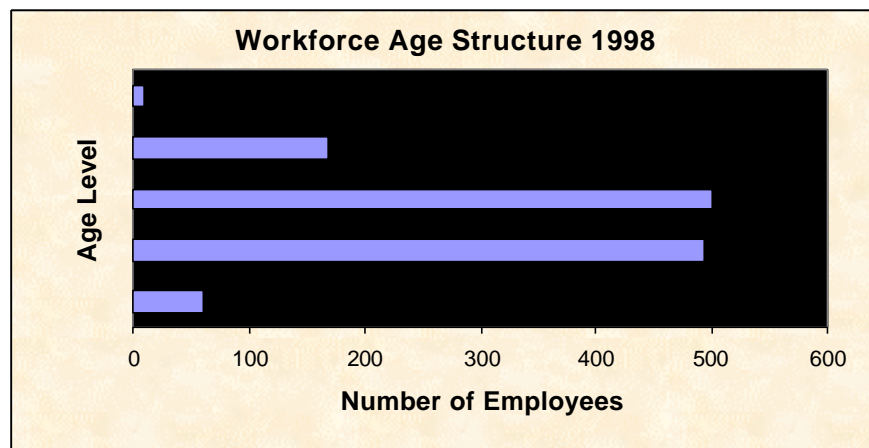
Source: TPCT (1998) Data Produktivitas SDM UTPK

Table 4.2 shows a negative trend in age class <25 due to the declining number of low level (blue-collar) employees for the last five years. The first reason for this is some of them have exceeded the age of 25 within that period. The second reason is the terminal applies a new policy that new recruits have to have a certain job experience. A truck driver, for instance, must have a minimum of 3 years driving experience. Those who join the terminal are experienced drivers who have been working in any trucking, stevedoring or other companies for more than 3 years and their age is nearly 25. The labor market provides many supplies for such required workers.

Table 4.2 also shows various trends in the other age classes. Age class 26–35 has an increase trend that indicates the positive growth of employees within this class. The number of employees in age class 36-45 and class 46-50 fluctuated over time and

at the end of that period both had the highest records. The last class of age over 50 showed a pretty high positive trend but it is not really significant in number. The average trends of those age classes, including class under 25, reflected the consistency of the terminal in maintaining its zero growth policy.

Figure 4.2
Workforce Age Structure 1998



It would be of interest to have a closer observation to the age structure of 1998 as shown in Figure 4.2. The figure indicates that the age classes of 26-35 and 36-45 have the biggest number of employees. According to Havighurst (1957, in Craig, 1989) and Super (1964, in Craig, 1989), the people in those periods of age are being in the most productive stage of the occupational cycle. The main characteristic of the stage is the people try to establish a permanent and stable position from themselves in their chosen field. Super also called it the most creative years of employment. Since they both constitute almost 81% of the total workforce, the terminal is far from manning shortage.

4.2.2. Basic Education Structure

Education is one of the main qualifications of the employees. By observing the basic education structure it is possible to evaluate the original quality level of the employees. Basic education means the formal education level that was achieved by the employees excluding additional training and education done after that. Almost similar to other countries around the world, Indonesia adopts a gradual education system from primary school, secondary school (junior and senior high school) up to university level. In order to fight against illiteracy, Indonesia established a nine-year compulsory education in 1984. Previously the compulsory education was applied only for six years (primary school). Since then the illiteracy level in Indonesia has been declining significantly.

The basic education structure may reflect the level of individual quality, i.e. the capability of doing his/her job based on his/her basic skill and knowledge learned in school. It could also indicate the level of readiness to learn more or to be developed. Furthermore, it could indicate the ability to adapt to new technology and system of work. In other words, it may reflect the individual capability to keep pace with changes required by his/her environment.

Table 4.3
Workforce Basic Education Structure 1994 – 1998

No.	Education Level	1994	1995	1996	1997	1998
1	Primary School	107	96	87	82	73
2	Junior Hi. School	151	149	148	130	127
3	Senior Hi. School	870	868	904	914	918
4	Undergraduate	45	44	52	61	60
5	Graduate	52	44	41	52	49
	Total	1225	1201	1232	1239	1227

Source: TPCT (1999) Data Produktivitas SDM UTPK

The first two education levels in Table 4.3 show a gradually declining trend for the last five years. The trend seems to continue in the future. Those who are being in

these levels are blue-collar employees. Due to a new personnel policy of the terminal to increase its labor qualifications, the number of blue-collar employees declines over time. Beside that some housekeeping work and general services, such as cleaning service, have been shifted to private companies. Many of them have a long working life because the terminal inherited them from its previous mother organization, the Tanjung Priok Port. Natural wastage is the main reason for them to leave the terminal. Another way offered by the terminal management is early retirement scheme.

The senior high school level has the biggest number of employees. Although decreased in 1995, the level shows a slightly positive trend for the last five years. The slightly positive trend especially from 1996-1998 reflects the consistency of the terminal with its zero growth policy. The employees within this level are the terminal's main workforces. They hold operational and administrative jobs in all divisions. The operations of the terminal are mainly dependent on their performance.

The high school educated employees seem to perform well in the jobs that required physical rather than intellectual exercises. But they could also be trained to do higher level work that requires higher skills and responsibility. That is why the terminal conducts a number of training and education programs, both in-house and out-house, to improve their performance. Even some of them take extra courses after work to get their pre-degree or degree. The terminal provides some recognition to their personal efforts in improving their qualifications. Improving their level of education means improving the opportunity to get promoted as well.

The employees who are being in undergraduate level and graduate (including postgraduate) level normally hold rather "white-collar" jobs. Their jobs require intellectual exercises more than physical work. They are placed in all divisions as supervisors or staff who work with planning and controlling functions. Most of the managers are university and academy graduates. One of the manager's qualification required by the organization is pre-degree and degree education. But it does not mean

that those who have no degree certificate will not be able to reach manager position. The first criterion of promotion (and demotion as well) is performance. Every employee has the same career opportunity that he or she could reach high level jobs as long as showing good performance and fulfilling all the required qualifications.

Table 4.3 also shows a steady fluctuation of employees' numbers in both levels during 1994-1998. The terminal only received some new recruits based on its actual need particularly for computer operators and programmers. A job rotation that is annually arranged by IPC II Head Office imposes the terminal to release its managers and receive managers from other units under the IPC II management.

4.2.3. Workforce Placement Structure

The way the terminal placing its human resources could reflect its operational orientation whether to administration or production. A government institution that primarily holds administrative functions allocates a big number, if not most, of its staff into the administration part of their operations. The structure of its organizations could also tell a lot about this tendency.

Table 4.4
Workforce Placement Structure 1994-1998

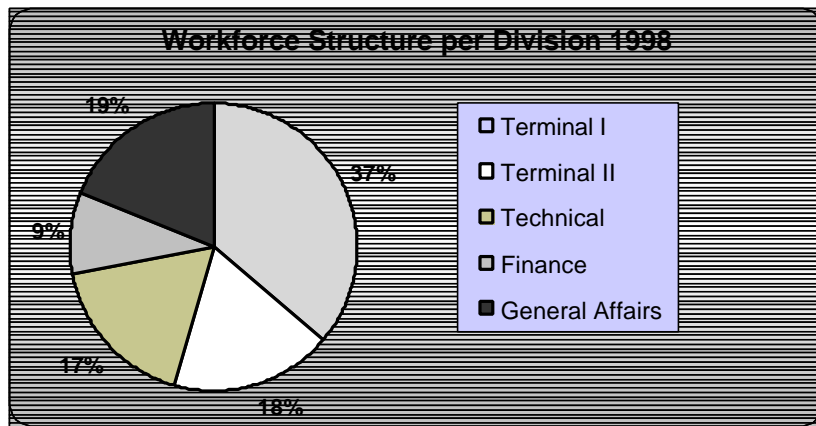
No.	Division	1994	1995	1996	1997	1998
1	Terminal I	419	409	444	444	444
2	Terminal II	251	243	239	237	226
3	Engineering	217	214	211	219	215
4	Finance	117	114	118	119	113
5	General Affairs	221	221	220	220	231
	Total	1225	1201	1232	1239	1229

An evaluation toward both placement and organization structure could indicate the level of efficiency of the organization or among units or divisions within its system. A government agency is normally seen as a cost-center, or a non-profit, organization

rather than a profit center. Thus the placement structure might reflect the terminal tendency whether functioning as a real business enterprise that highlights its commercial objectives or an administration entity that is dominated by bureaucratic mode of operations.

Due to its organization structure, the terminal places the employees based on their qualifications into the five main divisions. During 1994-1998 there are various trends among the divisions that look similar to one another as shown in Table 4.4. The biggest number of employees is absorbed by Terminal I Division and followed by Terminal II, General Affairs, Engineering and Finance Divisions. It seems that the terminal allocates more employees in the production part than in the administrative part of its operations. But the real picture of employees' allocation will be discussed further in Chapter Five.

Figure 4.3



Taking the statistic in 1998 as an example, Figure 4.3 shows clearly how the employees spread out into the five divisions. Terminal II Division, the General Affairs Division and the Engineering Division have almost the same size of workforce. Does it mean that the terminal has a balance orientation between administration and

production? In order to answer this question, it is necessary to analyze the composition of workforce based on their types of work.

The classification used in the beginning of this chapter put the employees into direct-operational, indirect-operational and supporting groups. Table 4.5 and Figure 4.4 illustrate how the supporting group has the biggest members followed by direct-operational and indirect-operational group. This composition indicates a tendency of overstaffing in the supporting group. However, it is too early to conclude that the terminal's orientation on production is equal with its administrative orientation.

Table 4.5
Workforce Structure
Per Types of Work 1998

No.	Category	Total	%
1	Direct-operational	508	41
2	Indirect-operational	162	13
3	Supporting	559	46
	Total	1229	

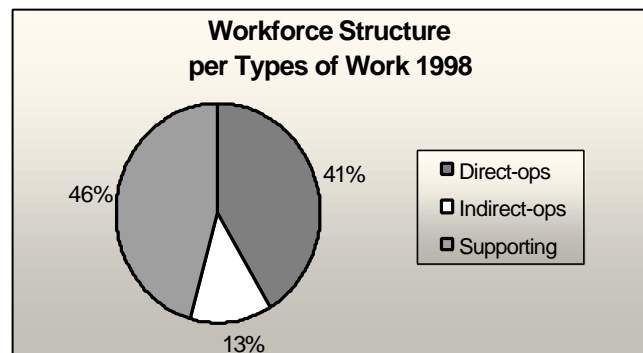


Figure 4.4

4.2.4. Workforce Job Level Structure

The last parameter of workforce availability is job level structure. This structure could be used to measure the level of potential success of the organization due to the appropriate availability of employees in every job level. The appropriate availability refers to a suitable composition between job levels in order to ensure that the functions of management are properly performed. Due to the fact that within the organization there is a considerable number of jobs that range from the lowest blue-collar jobs to the top manager, the management classifies them into three main categories, namely clerk, supervisor and manager levels.

The lowest level is clerk. The clerks are those who work either in operational, supportive or administrative groups without any leadership responsibility. In the personnel grade, their positions range from Grade 16 to Grade 13^{*)}. As its name indicates, a supervisor is responsible in supervising a number of staff under his/her command. There are two types of supervisors, namely junior and senior supervisors. Supervisors are in the middle level of management that bridge the command line between manager level and clerk level. Their grades range from Grade 12 to Grade 10. The highest level is the manager level that is actually divided into junior, senior and top managers. The managers normally position in Grade 9 to Grade 6, whilst the general manager is positioning in Grade 4.

Table 4.6
Workforce Job Level Structure 1998

No.	Job Level	1998	%
1	Clerk	994	81
2	Supervisor	208	17
3	Manager	27	2
	Total	1229	100

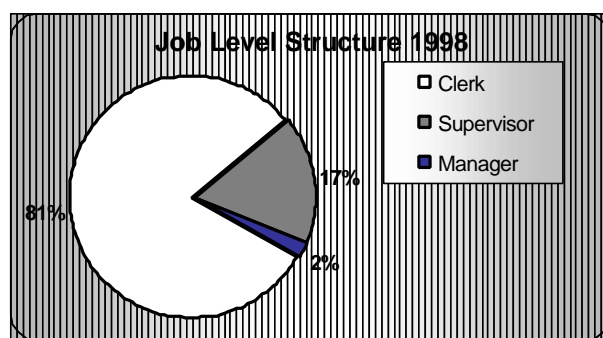


Figure 4.5

Table 4.6 and Figure 4.5 show how the three job levels are composed. The ratio between those three levels is 2% : 17% : 81% for manager : supervisor : clerks. In another way the ratio could be 1 : 8 : 38. It means that on average every manager has 8 supervisors and a supervisor has 5 clerks as his/her subordinates. This composition looks suitable for the terminal due to its function as a state-owned port operator that is imposed to utilize the available human resources effectively and efficiently. With only 5 clerks under his/her supervision, a supervisor is able to optimize his/her job. But for a manager, eight subordinates look rather over. It would likely be more suitable if the

^{*)} The grade ranges from the lowest 16 to the highest 1. This grade system is the basis of remuneration that the amount of salary received by the employees every month depends on what grade they belong to.

arrangement is shifted to be one manager for every 5 supervisors and one supervisor for every 8 clerks.

4.3. Workforce Utilization and Productivity

Utilization of workforce is the second indicator of human resource performance. Workforce utilization explains how well the available workers perform to meet the demands of the operations. Whilst the first indicator, workforce availability, reflects the potential dimension of the performance, the workforce utilization indicates its actual dimension, which is more visible and measurable.

The most common way to measure such utilization is by measuring the total output produced by a number of workers in a certain period of time. De Monie (UNCTAD, 1987) formulates this concept in a measurement of total tonnage produced by a gang of workers per hour or ton/gang/hour (gang output). There is a risk of bias in this measurement due to the distorting factor of gang composition. But since the gang composition in container terminals is more homogenous than in general cargo terminals, this concept is considered as sufficient and could be converted to TEUs/gang/hour or Boxes/gang/hour.

The following discussion is organized in two main sections, namely operational performance framework and financial performance framework. The first section contains the evaluation of the human resource performance by comparing the number of workers with the total throughput of the terminal, level of service and utilization of the terminal facilities. The second section discusses the HR financial productivity indicated by cost and revenues generated from utilizing the workforces.

The data used in the analysis is performance and productivity data in 1994-1998 with a special note in 1998 since it is considered as the worst point of the economic crisis of the region. The time series comparison will be biased if the 1998's

achievement is simply treated the same as the other years. The analysis will result in an overall evaluation of the level of human resources performance whether it is improved, stable or deteriorated.

4.3.1. Operational Performance Framework

In order to measure human resources performance within the operational performance framework, the number of workers is compared with the physical productivity of the terminal. The physical productivity is divided into three items, namely output, level of service and utilization of facilities (Horck, 1998). The measurement for output used here is total throughput of the terminal that is manifested in ship calls and cargo handled per year. Level of service is reflected in average time in port. Finally, the utilization of facilities is indicated by yard and berth occupancy ratio.

4.3.1.1. Total Throughput and Workforce Productivity

The terminal total throughput consists of two main categories, namely ship calls and cargo handled. The cargo handled is reflected either in TEU or in tons or both. As shown in Table 4.7 the number of ship calls during 1994-1998 fluctuated and tended to decline due to the change in ship's size. The latest trend in ships' structure makes them becoming bigger in size but smaller in number. Nowadays sea transport operators prefer to operate bigger ships with higher capacity. This results in a decline in number of the fleet.

Table 4.7
Total Throughput 1994-1998

No.	Category	1994	1995	1996	1997	1998
1	Ship calls	1984	1492	1574	1671	1443
2	TEUs	1,164,132	1300126	1,424,083	1,533,077	1,424,947
3	Ton	10,428,733	12,184,816	13,437,945	13,289,450	10,585,602

In terms of cargo handled, TEUs (twenty feet equivalent units) is used as measurement of container terminal production along with or even more popular than tons. Table 4.7 shows a significant positive trend of cargo handled both in TEUs and tons from 1994-1996. The year 1997 recorded a slight decrease of the throughput in volume about 148,495 ton or 1.1% but an increase in container movement about 108,994 TEUs or 7,65% from previous year. This is understandable since the economic crisis of the region began in this year. As the crisis continued the throughput (total tonnage) decreased both in tons and TEUs in 1998.

The decrease of total throughput in the last two years caused by the Asian crisis did not mean that the terminal was less productive than in the previous years. The cause of the decrease was an external factor and it is beyond the terminal capability to control.

Table 4.8
Workforce Productivity on Total Throughput
1994 – 1998

No.	Category	1994	1995	1996	1997	1998	Trend (exl.1998)
1	Nbr of employees	1225	1201	1232	1239	1229	0%
2	Production (TEUs)	1,164,132	1300126	1,424,083	1,533,077	1,424,947	10%
3	Production/HR	950	1083	1156	1237	1159	9%

Comparing the total throughput in TEUs with the number of employees, Table 4.8 above shows the level of human resource performance from 1994-1998. The human resource productivity showed a positive trend from 1994-1997. The average increase of the HR productivity is significantly beyond the average change in number of employees. It means that with a less number of employees the terminal could achieve better productivity. In other words, there was a significant improvement of human resources performance during 1994-1997.

In terms of direct workforce productivity reflected in number of boxes handled by a gang of workers, Table 4.9 below illustrates the fluctuation of the productivity level. The lowest point is in 1996 with only 17 boxes/gang/hour. This lowest point of productivity went together with the lowest number of gang employed per ship per shift in 1996 with only 2.71. Since 1997 the workforce productivity has been increasing every year.

The main cause of the decrease of workforce productivity in 1996 is equipment breakdown. Three container cranes in Terminal I and three other cranes in Terminal II were seriously broken down in that year (Fitrianto, 1998). The equipment shortage during the year, although not the whole year, affected the overall process of production. Beside Workforce productivity, it also affected berth productivity that was reflected in a higher berth occupancy ratio (BOR) than the previous years. The terminal would have been able to reach a higher throughput if all the equipment had been reliable.

Table 4.9
Direct Workforce Productivity

	1994	1995	1996	1997	1998
Boxes/Gang/Hr	19	18	17	19	20
Gangs/ship/shift	2.62	2.73	2.71	2.74	2.73

Applying a statistical correlation analysis, the fluctuation both in level of productivity and number of gang employed have a very small coefficient of correlation, $r = -0.036$. It means that the changes in those two variables have no effect to one another. The number of workers is not a good predictor for the level of their productivity. It indicates that the determinant factor of the worker productivity is not their number. If it is not the quantity of workers, it could well be their quality that determines the level of workforce productivity.

4.3.1.2. Quality of Service

Time in port (TIP) is the most critical issue among others that put the port in a focus of blaming as a bottleneck point in the sea transport system. Minimizing TIP is essential not only for port operators in order to get rid off the blame but also for all parties related to cargo and ships. The main reason for this is to minimize the costs incurred in port whether from service to cargoes or ships. In this regard the port should consider itself as an actor in providing added value in a logistic or value chain. Moreover TIP is one of the main criteria for ship owners in choosing a port of call. Thus, TIP by no doubt is a determinant factor of port competitiveness (UNCTAD, 1990b).

TIP is therefore an indicator of the quality of service of a port operator (Francou, 1998). It reflects how well the port operator satisfies its customers' demands. The public will judge the service of the port as good or bad by simply looking at TIP. If the time in port declines over time it means that the port operator has been doing well in improving its performance and efficiency. This could be achieved by optimizing the utilization of available resources such as land, capital and human resources.

Time in port or turn-round time is total time spent by ships in the port from the arrival point until leaving the port. The main components of TIP are waiting time and service time (Francou, 1999; Horkc, 1998; Mancion, 1998). Waiting time is time during which a ship is waiting for a berth. It indicates the delay between the ship's arrival in port and its tying up at the berth. The shorter the waiting time, the better for the ship operator and the port as well. Service time is time during which the ship is berthed including working and non-working periods.

Table 4.10 shows how TIP of the terminal from 1994-1998 changed. It seems that the terminal has been doing a good job to reduce TIP, especially the waiting time which shows an average change of 9% per year. The service time, although less

significant than waiting time rate, showed a steady decrease of about 2% per year. Those two components contribute a 5%-annual decrease of the turn round time.

Table 4.10
Time in Port 1994-1998 (in hours)

No.	Category	1994	1995	1996	1997	1998	Trend
1	Waiting Time (WT)	15,17	14,41	12,59	12,35	10,37	-9%
2	Service Time (ST)	30,42	31,28	29,86	28,75	27,45	-2%
3	Turn Round Time	45,59	45,69	42,45	41,1	37,82	-5%
4	WT/ST	50%	46%	42%	43%	38%	-6%

The achievement of the terminal in reducing its turn-round time and improving its efficiency is a result of optimizing the utilization of its resources especially the human resources. Apart from the procurement of new equipment and infrastructure expansion in the last five years, the main cause of this achievement is the improvement of human resource effectiveness. The workers have been showing better performance and have become more productive.

The improvement of performance did not only happen in the direct operational field but also in the supporting and administrative ones. The clearance of document and other administrative formalities' work, which are considered as constraints for a fast and reliable service, seemed to be done efficiently. The efficient document clearance is also supported by the implementation of Electronic Data Interchange in 1997, which improves the access and connection between the terminal, ship operators, shippers, the Customs, freight forwarders and the banks. Most of all, reliable workers whose skill enable them to work more efficiently with such a new system is the main explanation for this achievement.

Despite the annual achievement of the terminal in reducing its TIP which improves from year to year, the ratio of waiting time to service time is still below the

target. The management targeted that the ratio should decrease 10% from the previous year (Fitrianto, 1998) but Table 4.10 shows the achieved ratio is only 6% on average. This fact indicates that although there has been an improvement in achievement, the terminal needs to improve its performance to fit the target.

4.3.1.2. Facilities Utilization

The utilization of facilities is another indicator of efficiency of the terminal (Francou, 1999). The level of facilities' utilization is reflected in occupancy ratio. The facilities' occupancy ratio(s) is the ratio obtained by dividing the time the facilities (berth and yard) have been occupied by the time they are available in a certain period of time (Mancion, 1998). In this regard the most popular measurements in use in container terminals are berth occupancy ratio (BOR) and yard occupancy ratio (YOR). Those two ratios indicate the level of utilization of the terminal's facilities and their availability as well.

**Table 4.11.
Facilities Utilization**

No.	Category	1994	1995	1996	1997	1998	Trend
1	B O R	71,23	76,19	78,03	70,94	67,21	-1%
2	Y O R	72,5	64,5	63,18	57,27	43,93	-11%

Table 4.11 above shows a fluctuation in berth occupancy ratio and a steady decline in yard occupancy ratio during 1994-1998. The terminal had a quite high BOR during that period and reached the worst point of 78.03% in 1996. The ideal BOR for a terminal which has two berths is 50% and 60% is for three berths (Francou, 1999). The terminal's BOR exceeded the accepted occupancy level for two berths and even for three berths. However, Table 4.11 shows an improvement of the berth efficiency and productivity in 1997 after bad records in the three previous years. As has been

discussed earlier, the equipment breakdown in 1996 contributed to the occurrence of the high BOR of the year.

The situation on the yard side is a little bit different. Table 4.11 shows an improvement of yard efficiency that annually reaches 11% on average. The lowest change is in 1996 with only 2% improvement from 1995 due to the equipment breakdown discussed above. Although the breakdown happened on the berth side since the terminal operation is an integrated system, it also affected the yard operation. After the breakdown had been solved, the yard production started recovering and booked a 9% change in 1997. In 1998 the production made an impressive record of change with about 23% from the previous year, so the occupancy ratio declined.

Despite the equipment breakdown that had a significant impact on its production in 1996, the yard was still able to bring down the occupancy ratio by 2% from 1995. It indicates that the other resources in the yard functioned effectively. The operations in the yard, including stacking, lifting on, lifting off, and transferring the containers to and from CFS, were done effectively by the main support from human resources. Poor performance of human resources would cause a low production. The HR performance was manifested not only in physical operations, such as moving/driving vehicles and conducting repair and maintenance work to the equipment, but also on the management side. Good planning and management of the operations resulted in high productivity.

4.3.2. Financial Performance Framework

In order to obtain a complete figure of human resources performance of the terminal, an analysis within a financial performance framework is essential to conduct. The financial performance indicator is used in measuring the performance of a port in terms of how well it attains a financial target of its operations. The common financial objectives of the port operations are generating optimal revenues and minimizing costs. The discussion

about HR performance within the financial performance framework covers this revenue-and-costs perspective.

The focus of the HR performance evaluation in this framework is labor cost since it is considered as a particularly significant productivity indicator (UNCTAD, 1987). The labor cost per ton of cargo handled reflects the output achieved and the effort put in expressed in monetary terms. It indicates the efficiency and effectiveness level of the terminal operations. The less costly handling will be identified as more cost-effective handling. The time in port should also be rational if the cost-effectiveness of such handling was approved.

The labor-cost element, particularly on general cargo terminal, in recent years has become more fixed cost than variable cost. This shift leads to higher productivity and lower employment levels and stimulates development of mechanization. As a consequence the port or terminal management is imposed to establish a policy of full utilization of existing facilities and resources to achieve maximum productivity (UNCTAD, 1987).

Table 4.12 below shows a positive trend in income gained of 18% per year as production increase 10% per year. The terminal's income is mainly from cargo handling activities since ship services, such as pilotage, mooring and towing, are provided by the Port of Tanjung Priok. The 18%-positive trend (excluding 1998) indicates the optimization in utilizing the existing resources into the operations. The terminal attains a higher income every year by utilizing relatively the same number of workers.

The figures of 1998 looks very dramatic because of the value of rupiah, Indonesian currency, to the US dollar fell down. All the revenues of the terminal as reflected in port tariffs are in US dollar and are converted to rupiah. During the Asian crisis the value of rupiah fell down about four to five times from the one before the crisis. It was about Rp.2,500 (two thousands and five hundreds rupiahs) per US \$1,-

and then became Rp.10,000 to 12,000 on average during the late 1997 to 1998. That is why the figure is excluded from the evaluation to avoid distortion.

Table 4.12
Financial Performance and Workforce Productivity

No.	Category	1994	1995	1996	1997	1998	Trend*)
1	Number of workers	1225	1201	1.232	1239	1229	0%
2	Production (TEUs 000)	1,164	1,300	1,424	1,533	1,425	10%
3	Income (Rp.mil)	168,205	222,933	230,852	271,743	483,118	18%
4	Total Cost (Rp.mil)	59,303	72,828	102,029	117,762	352,49	26%
5	Labor Cost (Rp.mil)	12,120	12,787	13,125	13,826	20,323	4%
6	Production/worker (TEU)	950	1083	1156	1237	1159	9%
7	Income/worker (Rp.000)	137,310	185,623	187,380	219,325	393,098	18%
8	Labor Cost/worker (Rp.000)	9,894	10,647	10,653	11,159	16,536	4%
9	Labor Cost/Total Cost	20%	18%	13%	12%	--	-17%
10	Labor Cost/TEU (Rp.)	10,412	9,836	9,217	9,019	--	-5%

*) *Trend of annual change excluding 1998*

Table 4.12 also shows the average change of 4% per year in labor costs. The main components of labor costs are benefit program and training and development program expenses. Benefit program expenses include remuneration, annual bonus, incentives, health support and special rewards. Remuneration is given to every employee on monthly basis depending on what grade he or she belongs. The terminal adopts a merit system of remuneration that divides the employees into 16 different grades. As discussed earlier the grade 1 is the highest, then come other grades and ends up with the lowest grade of 16.

Annual bonus is given to the employees due to the achievement of the terminal that exceeds the operational and financial target. In a year the bonus could be given

the same value of 4 months salary. Incentives are only given to operational workers who work in shifts 24 hours a day. Health support as it sounds is given to the employees to compensate any expenses occurred in supporting their health and their families' health as well. There is no standard for the health support so it could be different from one to another employee depending on their personal expenses. Special rewards are annually given to particular employees as an appreciation for their outstanding performance.

Training and development program expenses include training fees, lumpsum support and promotion. Training fees may cover tuition fee and training materials fee. Training lumpsum support is given to every employee who is sent to a particular out-house training. It is given as a package or lumpsum of financial support to cover transportation, accommodation and living costs when they do the training. Another expense occurs when there is an employee's promotion.

As shown in table 4.12 that the terminal spent almost the same amount of money to cover the two main components of labor costs during that period. The 4% difference from year to year is mainly caused by inflation rate. But substantially the expense is almost the same due to the number of the employees that remains relatively stable. Another probability for this is that the terminal raised the remuneration rate in 1997 and 1998 that depending on its current financial capability.

Another interesting figure is the ratio between labor cost to total costs. Table 4.12 shows the ratio between them declined every year by 17% on average. It indicates that the labor costs became a smaller portion of the total cost. This figure has two meanings. Firstly, the terminal did not allocate an increase budget for human resources affairs. Secondly, the main expenditures of the terminal were non-human resources posts. Obviously human resources affairs became less burdening in the terminal annual budget.

Last but not least, the ratio of labor cost to every ton or TEU handled by the terminal is the primary indicator of cost-effectiveness. Table 4.12 shows a negative trend of 5% on average which indicates the decline of labor cost per TEU from year to year. In 1994 the labor cost per TEU handled was Rp.10,412 (ten thousands four hundred and twelve rupiahs) and it became Rp. 9,019 (nine thousands and nineteen rupiahs) that is only 87%. It means that the handling operations in the terminal become more cost-effective every year. This is enabled by the effective use of workforce in the terminal.

4.4. Integrated Evaluation

Most evaluations end up with judgment whether the subject of evaluation is in one or another point of a polarity, such as sufficient or insufficient, poor or effective, good or bad, satisfactory or unsatisfactory. Making judgement contains a potential risk of bias that the standard of measurement chosen is insufficient or rather subjective. However, since an evaluation produces judgement, this last part of Chapter Four discusses how to judge the human resources performance of the terminal. In this regard Talley (1994) proposes a polarity between improving and deteriorating.

Workforce availability is the first indicator of human resources performance to answer how sufficient the existing workforce is in meeting the demands of the terminal (operations). The terminal operations require a certain number of workers with a certain level of skills. The structures of age, basic education level, placement and job level of the workforce are the main measurement of this availability.

In terms of age, most of the workers are in the productive period which convinces the terminal of being far away from productive workers shortage. In term of HR quality, the terminal has a large number of workers graduated from senior high school who have the necessary capability to learn new systems to keep pace with changes. Regarding the placement of workers in the five main divisions, the

operational side of the operations absorbs the biggest number of the workforce. The existing composition of workforce on job level (manager, supervisor and clerk) looks suitable for the current situation. Frankly, the composition could be modified to improve the communication flow and job delegation effectiveness between levels. The latter issue will be discussed further in Chapter Five.

Time series analysis shows, although the terminal maintains its zero policy, the workforce availability level improves from year to year. The most apparent proof for this is the declining number of workers in primary school level and increasing numbers in the upper levels. This fact means that the number of workers with the required quality improves over time.

The second indicator of human resource performance is workforce utilization that measures the level of utilization of available workforce to achieve the target of the operations. Firstly, the analysis is done within the operational performance framework which identifies the contribution of human resources in the terminal production manifested in total output, quality of service and facilities utilization level. Secondly, within the financial performance framework, the analysis recognizes the contribution of human resources in generating revenues and attaining a cost-effective operation.

An indication of improvement of HR utilization is examined by time series analysis. The time series analysis examines the performance by comparing the change in performance over time which produces a general trend line (Ma, 1999a). Apart from the Asian crisis phenomena, the terminal has attained an improving achievement in the last five years. Optimizing the utilization of existing resources mainly land, capital and human resources enabled this achievement. Human resources seemed to be utilized more efficiently and effectively in producing more outputs, improving quality of services, and minimizing the occupancy ratios of terminal facilities utilization.

The performance is considered as improving due to the better achievement in a particular year than what has been achieved in the previous years. This judgement could be misleading since the performance should be compared with the standards used in the measurement (Mitchel & Larson, 1987; Talley, 1994). The ideal measurement of a performance always compares what has actually been achieved with what is expected to be achieved. Then the judgment will be sub-standard, on standard or above standard. The standard is usually set up with reference to the previous achievement that in the future the performance level is expected to be higher. The terminal could also adopt standards which are commonly used by other actors in the business.

Using the standards used in both the operational and financial performance frameworks, the result of the human resource performance evaluation of the terminal seems to be different from the one done by time analysis. In terms of quality of service, for instance, the management set up an annual decrease of 10% in the ratio of waiting time to service time. The average decrease achieved by the terminal is 6% per year. Another sub-standard figure can be seen in the level of efficiency reflected in facilities utilization ratio in which the best berth occupancy ratio (BOR) achieved by the terminal for the last five years is 67,21% in 1998. This figure is still below standard compared with the ideal BOR for a two-berth terminal, that is 50%.

The latter fact shows that despite the terminal has recorded an annually improving achievement for the last five years, its performance is still sub-standard. It means that the terminal could have been better than that. The workers might perform quite well from year to year but their performance is not yet up to standard. Some officials of the terminal reported that the workforces in some particular divisions are not optimally utilized yet. So the next task is to identify what is the cause of this sub-standard performance. Chapter Five will cover this task and propose some solutions to improve the performance as well.

4.5. Summary

The analysis of human resources performance in this chapter has been done in three steps. Firstly, a set of performance indicators was selected to be the basis of measurement. Secondly, the analysis was done in the operational and financial performance framework by comparing the number of employees with the total production and the annual income. The main method used was time series analysis. Thirdly, based on the result of the measurement, a judgement on the level of human resources was made. The judgement is that human resources of the terminal has been showing an improving performance for the last five years. But this performance is not up to standard yet. Chapter Five will discuss the possible causes of this sub-standard performance.

CHAPTER FIVE HUMAN RESOURCES PERFORMANCE IMPROVEMENT PROGRAM

5.1. The Critical Dimensions

Rummler and Brache (1989) disagree with an assumption that people are always at the root of all performance problems. This assumption is as illogical as assuming that a bad battery is at the root of all automobile malfunctions. The defective battery should be considered as a part of an engine system. A number of components of that system may harbor the cause of the problem. Even if the battery is performing inadequately, it may be because of another component; the root may lie elsewhere in the engine. Similarly, people are one part of a “performance engine”, the Human Performance System, which has a number of components that influence performance.

As discussed in Chapter Three that the Three Performance Level model identifies three levels of performance namely organization level, process level and job/performer level, the causes of human resource performance discrepancies may well lie somewhere in those levels. In order to overcome the discrepancies and to improve performance, it is essential to identify possible causes of the discrepancies. Rummler and Brache (1989) name such causes as critical dimensions of performance that exist as barriers to a worthy performance. The worthy performance, or competent performance, connotes the highest reasonable standards of quality results, necessary quantity and wisest use of resources to get both kinds of result (Gilbert, 1982).

5.1.1. The Critical Dimension in the Organization Level

The critical dimension that could be observed in the organization level is the inappropriate composition of workforce among divisions. This deficiency is about the management of the organization rather than its goals and design. In terms of goals, the terminal seems to have a good direction that represented in its mission statement which articulates the requirement of both customers and the organization. In terms of design of the organization, the existing divisions seem to reflect all necessary functions to achieve its goals.

As discussed in Chapter Four the existing composition of the terminal workforce has three main groups, namely direct operational, indirect operational and supportive. This composition shown in Table 5.1 and it could be misleading since it does not reflect the real situation of work in the terminal. Those who are categorized as indirect operational staff are actually administrative staff that are placed in operational divisions, i.e. Terminal I and Terminal II. They do administrative work and are not grouped into operational shift-groups. Meanwhile those who work in the Engineering Division are grouped as supporting staff together with those who are being in really administrative division, i.e. the General Affairs Division. The Finance Division seems to stand in between operational work and administrative work since some of its staff are grouped into shift-groups, which are almost similar to operational shift-groups. The latter staff work in direct-service points such as document clearance service that is open 24 hours. They can not be simply categorized as administrative staff as such but rather supporting staff.

For the sake of performance improvement, an alternative composition is proposed here. The alternative composition classifies the employees into three different groups, namely operational, supportive and administrative staff. Operational staff as has been defined in Chapter Four are those who work on the first front of terminal operations, such as crane drivers, truckers and operational foremen.

Supportive staff are those who work to support the main production of the terminal, such as engineers and mechanic staff in the Technical Division and some staff from the Finance Division who work in shift-groups. They do not follow the shift system as applied to operational staff but work in normal daytime from 08.00 to 17.00. What makes them differ from administrative staff is they do watch-duty at nighttime. Every staff member has his or her turn once a week. The watch-duty is important to ensure that their service is sustainable particularly in case of emergency.

**Table 5.1
The Existing Composition
of Workforce**

No.	Category	Total	%
1	Direct-operational	508	41
2	Indirect-operational	162	13
3	Supporting	559	46
	Total	1229	

**Table 5.2
The Alternative Composition
of Workforce**

No.	Category	Total	%
1	Operational	508	41
2	Supporting	233	19
3	Administrative	486	40
	Total	1229	

Those who work with administrative matters of the terminal are categorized as administrative staff. They may include staff from the Personnel and General Affairs Division, the Finance Division, and the Marketing & DATIN unit. Their working time is from 08.00 to 17.00, from Monday to Friday. Table 5.2 illustrates the alternative composition that shows a different figure of the workforce placement from the one discussed in the previous chapter (also see figure 4.4 and table 4.5)

According to table 5.2, the administrative group absorbs about 40% of the total staff. It could be read that the administrative work becomes as significant as the operational work of the terminal. This could also be considered as an indication of overstaffing in the administrative group. Some reports said that the allocation of staff in the operational group and the supporting group seems to be disproportional. According to the reports, overstaffing is seen in some operational sub-divisions. Whilst some

other sub-divisions particularly in the Engineering Division (ED) seem to lack staff. This inappropriate allocation of human resources causes a poor performance of the terminal.

Taking the situation in the Port of Rotterdam as comparison, the composition of workforces of Rotterdam Municipal Port Management (RMPM) and Europe Combined Terminal (ECT) is shown in Table 5.3¹. RMPM is the owner and operator of Port of Rotterdam (landlord) in general and ECT is a private company which operates the main container terminals within the port. Table 5.3 shows that both RMPM and ECT have more employees in the operational group than in the supporting group and the administrative group put all together. This figure indicates their emphasis of operation is in production rather than in non-production or administrative work.

Table 5.3
Workforce Composition in Port of Rotterdam

Organization	Operational		Support. & Adm.		Total
	Numbers	%	Numbers	%	Numbers
RMPM	777	66	395	34	1,172
ECT	1,421	63	835	37	2,265

Actually ECT operates the most automated container terminal in the world where cargo transfer operations in its terminals are done by Automated Guiding Vehicles (AGV). The vehicles are operated without driver. Their movements are automatically guided by electronic eyes-installation underground. Meanwhile on the administration side, a computerized system enables most of the work done efficiently. Thus, the existing employees are positioned in the jobs that can not be replaced by machines and computers.

¹ The information about this is transferred by Ms. F. De Vos, an official of TEMPO, RMPM, via email per 22 July 1999, VOSJ@port.rotterdam.nl.

An interesting phenomenon happened some years ago in regard to lack of staff in the operational and supportive groups. There was a “staff-piracy”, as what the ED people name it, due to equipment operators shortage. At that time the management decided to make internal recruitment so that a number of staff form ED were transferred to be operators. The reason for this decision was the ED staff, especially mechanics, know a lot about the nature of the equipment and they are able to operate them as well. This shortcut solution created another problem: shortage of ED staff. This would not have happened if the composition of workers reflected and fulfilled the actual needs of the operation.

5.1.2. The Critical Dimensions in the Process Level

The process level of performances deals with processes within the organization, flow of work and procedures as derivations of the organization's main functions. The critical dimensions in this level involve organization structure, composition of job level, career path and training system.

The Existing Structure of Personnel & General Affairs Division

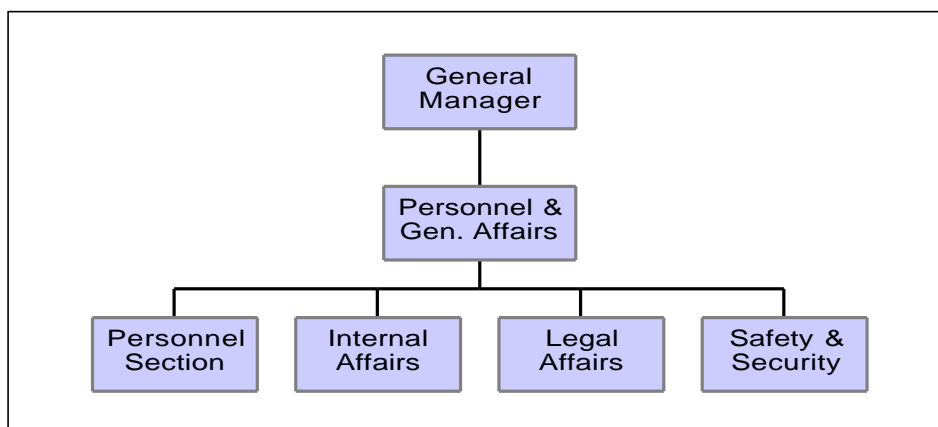


Figure 5.1

Firstly, the critical dimension could be recognized in the organization structure under the Personnel and General Affair Division (PGAD). As shown in Figure 5.1 the PGAD has four sub-divisions, which are also called sections. Considering its workloads, the Personnel Sections should not have been treated the same as other sections particularly the Legal Affairs and the Safety & Security Section. At the moment the Personnel Section has three sub-sections, namely Personnel Planning, Personnel Development and Personnel Administration. One could imagine how broad the coverage of the Personnel Division is, which it even is possible to stand as a function or a division.

Secondly the composition of staff according to their job level looks inappropriate. Table 4.6 and Figure 4.5 in Chapter Four shown the composition between *manager* : *supervisor* : *clerk* is 1 : 8 : 5. It means that every manager has eight supervisors each of whom has five subordinates. At glance there is nothing wrong with it, but when taking a close look at it a potential problem to management effectiveness would be identified. The composition could also sound that a manager is busier than a supervisor in managing or supervising his/her subordinates. Thus, the existing composition needs to be modified to guarantee the best flow of information and the effective pattern of communication among the employees. This could be done by modifying the organization structure to give a better look to the composition.

The third critical dimension is manifested in the insufficient career path for equipment operators or drivers. Operating hi-tech equipment requires special skills and ability that could only be achieved through a certain level of training and working experience. Due to the fact that there are various types of handling equipment in the terminal with various levels of technology, the levels of skills also vary among operators. To operate a front-end loader, for example, requires skills that are higher than to operate forklifts. It imposes the Personnel Section to ensure that the supplies of operator for all types of equipment match the actual needs of the operations. It could only be done by implementing a sound career path that covers the necessity of placing

operators to the right type of equipment operation according to their actual levels of skills.

The existing career path for operators seems to be insufficient since the management did not consistently implement a gradual pattern of career development. In this regard the Malta Freeport² provides a good example since it applies a system where a crane operator should have had experiences in operating lower level equipment from forklifts, trucks/tractors and transtainers. This system produces operators with high level of skills and attitude because they have followed all the necessary operations to attain a certain level of job in the operator career path. Briefly speaking, the operators' careers are gradually developed.

The Malta Freeport management also provides some recognition to operators with outstanding performance. One of them is sending the high performance operators to Rotterdam for a special training for instructors of equipment operations. Apart from the recognition to be promoted as trainers, the operators can still continue their jobs as operators. This system has a good impact on promoting operators' morale and avoiding social jealousy. They all know that only the competent and effective operators can reach higher jobs along their career path. Most of all, it guarantees to provide operators with an appropriate level of skills and attitude to operate the equipment safely and efficiently.

The fourth critical dimension in this level is the inconsistent implementation of training system. Actually the terminal has a training system adopted from IPC II, its mother organization. This system imposes the Personnel Section to plan training programs for the employees in all levels. The system requires an identification of actual training needs as the basis of the training plan. But in practice the training need identification is often done by an armchair method, which means that managers or

² Information about this was given by Mr. John Porteli, the Manager of Training Center, in his class during PM 1999 class field study to the Malta Freeport, 4 March 1999.

supervisors estimate what kinds of training are needed by their subordinates without really confirm the actual demands of their jobs' performance. The result is a training plan that does not reflect the real needs to improve the employees' performance. So the terminal needs to consistently implement the existing training system.

In terms of training delivery, the terminal task is only proposing training plans based on training need identification. The proposal is annually submitted to the IPC II Head Office. It is the IPC II who delivers the training and not the terminal. The dependency of the terminal on its mother organization in training affairs has a negative impact on the job performance. It is because the implementation of a training result to the real job is less monitored since the terminal does not follow all details of the training activities. The consequence is the quality of skills and knowledge learnt from the training are below expectation. This contributes to the poor performance of the employees.

Together with motivation, training is the determinant factor to the effective performance (Cascio, 1986). In order to optimize the effectiveness of training, it is essential to consistently implement the existing training system. It could be done by firstly giving autonomy to the terminal to plan, deliver and measure the effectiveness of the training. This will enable the terminal to hold a more significant responsibility in developing its human resources. Secondly, the Personnel Section staff should be trained in training management to improve their skills in conducting all activities within the training system. This proposal requires an immediate action otherwise the investment on training will never really gain its return.

5.1.3. The Critical Dimensions in Job/Performer Level

The job/performer level is mainly about the employees who execute or perform jobs, processes and procedures. Any deficiencies in this level could be caused by deficiencies in upper levels and in this level itself. The human resource performance

system that contains input, performers, output, consequences and feedback sub-systems provides perspective to understand the critical dimension of this level of performance.

The first critical dimension is lack of staff understanding to their job goals in relation with the functional goals of the organization. Functional goals are the goals that set up by the main five functions of the organization which ideally refer to the requirement of customers and the organization. A staff member may understand his or her job as what is stated in his/her job description but there is a doubt that he or she well recognizes the relation between individual and functional goals.

In accordance with the last problem, some reports said that a number of staff do not really understand the measurement of their performance. The job description, that is given by the Personnel Section to every jobholder, mentions a job performance standard beside the description of task and responsibility of every job. But some employees do not fully understand the performance standards of their jobs and how the measurement should be done. In an extreme case, some staff just perform their jobs as what they have been told or what they observe their colleagues performing without confirming them to their written job descriptions. This situation where some staff have no serious curiosity to the measurement of their performance could lead to a worse problem, which is lack of employees' care about their performance whether meeting the standards or not.

Lack of performance feedback is the second critical dimension. Every jobholder needs feedback on how well he/she performs the job. Actually the terminal has a performance appraisal system or what is called Penilaian Karya Pegawai (PKP) whose results could be used as performance feedback. But since the PKP is not fully implemented due to a number of practical reasons, the results are not reliable yet to be a feedback basis. The problem in PKP implementation is also caused by lack of understanding among raters (the managers and supervisors) on the performance

measurement. The absence of reliable and objective feedback leads to an inappropriate comprehension of individual performance among the staff.

As a matter of fact the appraisal system (PKP) was renewed in January 1999. The new version of PKP is intended to ease the raters in implementing the system. Indeed, the new version looks easier to implement at least in the reducing numbers of performance factors to be measured from 9 to 4 factors as shown in Figure 5.4. It also looks more quantitative than the previous one. The appraisal is done either annually or quarterly based on the evaluation of individual performance portfolio. Due to the fact that the implementation of the new version of PKP has already commenced early this year, its impact on performance improvement is still under question.

Table 5.4
Factors of Performance Evaluation

Old Version	New Version
1. Job result	1. Job result
2. Job knowledge	2. Job efforts
3. Job skill	3. Discipline
4. Leadership	4. Leadership
5. Decision making	
6. Discipline	
7. Co-ordination	
8. Responsibility	
9. Initiatives	

Although employees may understand at a conceptual level what behaviors are expected, they may not always be fully aware of whether or not they are actually meeting those expectations. That is why employees require an accurate performance feedback about how they are behaving beside clear expectations about how they should behave. Managers should give feedback as soon as they see signs of performance problems. There are two benefits in giving feedback early. First, the performance problem can be

corrected quickly. Second, the manager is more likely to be able to give the feedback in an objective and non-threatening way. This will increase the chance that employees will accept the feedback and respond to it positively (Mithcel & Larson, 1987).

Fairbank and Prue (1982) add those benefits of implementing a good feedback system by the relatively low economic cost to the organization, simplicity of implementation, decreased use of punishment procedures or other disciplinary actions, and positive emphasis. These benefits do not only make the feedback system attractive but also more human. It is because every employee is treated as a member of a big family. If she or he does not perform well, the managers or supervisors will not judge it as a fixed-permanent error but together with the employee solve the problem.

The last critical dimension in the job/performer level is that the existing motivational program does not produce a significant impact on staff performance. This problem is about the consequence of performance that theoretically an individual tends to perform his job well if he saw an appropriate consequence of his performance. The program contains activities that are intended to recognize an outstanding individual and even group performance. Actually, the terminal has a performance-based remuneration system where compensation is given to every staff according to the contribution he/she gives to the organization. But since the incentive is only given to the direct-operational and indirect-operational staff and not to supporting staff, it allows a room for social jealousy. The system should have been guaranteed to cause social and psychological security to all employees.

In addition to the remuneration, as what Warren (1982) suggested, the terminal should have a sound motivational program that makes individual performance matter. The existing motivational program provides performance recognition to the best performer of the year. The management selects one of the most outstanding performers from all units within the organization. The General Manager presents the reward to the elected employee in the annual anniversary of the terminal where the

public watching. The program seems to be insufficient due to its low frequency. Ideally the recognition is given monthly, which reflects the continuous performance measurement and the serious intention of the management to establish a performance-oriented culture.

5.2. Proposing Performance Improvement Programs

5.2.1. Aim and Objective

- The aim of proposing improvement programs is to solve the main problems related to the current performance of human resources of the Tanjung Priok Container Terminal. The solution is expected to facilitate the employees to produce better performance both individually and functionally.
- The objective of proposing improvement programs is to provide some alternative programs to improve the human resources performance. The basis of the proposal is the evaluation of the critical dimensions in the three levels of performance, particularly in the job/performer level.

5.2.2. The Basic Concept

The development of any programs to improve employees' performance would be more meaningful if it is not only based on the actual causes of the performance discrepancy but also the research results in this field. Cascio (1986) identifies three areas of responsibility to where the managers of the terminal need to focus their attention, namely performance definition, performance facilitation and performance encouragement. Focusing attention on those areas is essential to ensure that the proposed programs will match with the actual demands and to coordinate and integrate human resource policies.

Performance definition is a description of what is expected of employees, plus the continuous orientation of employees toward effective job performance. It includes three elements: goals, measures, and assessment. Goal setting is an effective performance improvement strategy. It enhances accountability and clarifies the direction of employees' efforts. The earlier discussion showed that the management needs to reset the goals both functionally and individually. Moreover the reset goals should clearly reflect the relationship between individual and functional requirements. It is important to ensure that the employees fully understand this relationship.

The management should also find a way to operationalize and therefore measure the accomplishment of the goals. It means that the employees should be well informed about how the measurement of their performance is conducted. This is where the performance standards play a vital role, for they specify what the worthy performance really means. The performance standards should therefore be specific and quantitatively measurable.

The regular assessment of progress toward goals encourages a continuing orientation toward job performance. The measurable goals are worthless if the management fails to assess them. This is so because if there is no assessment of performance on these goals, then the goals cannot motivate the employees to improve their performance (McFillen & Podsakoff, 1983). A sound performance appraisal system plays a vital role in maintaining the employees' motivation to perform well.

Performance facilitation, the second area of management responsibility, is the elimination of roadblock to the worthy performance. It has three aspects: removing performance obstacles, providing the means and adequate resources for performance and carefully selecting personnel. Obstacles to performance may exist in forms of improperly maintained equipment, delays in receiving supplies, poor physical design of workspaces, and inefficient work methods. The management must eliminate them in order to create a highly supportive task environment. Otherwise motivation will decline

as employees become convinced that the management does not pay attention in getting the job done.

When there is no provision of adequate financial, material and human resources to get a job done right, a similar problem can arise. The absence of adequate resources is a self defeating strategy and excessively costly in the long run, as employees begin to doubt whether their assigned tasks can be done well.

The performance motivation is significantly affected by selection of employees (Cascio, 1986). Poor staffing procedures have negative impacts on the employees' motivation since the employees are placed in the wrong places where their qualifications are either too high or too low compared with the actual requirement. Such a strategy may result in overstaffing, excessive labor costs, and reduced productivity.

Performance encouragement is the last key area of management responsibility. In this area the management is entitled to provide rewards and carefully accommodate some issues of value, amount, timing, likelihood, and fairness of the rewards. The value and amount of rewards relate to the choice of rewards to be used. The management must offer rewards to employees (e.g. job redesign, flexible benefit system: recognition, stock ownership, cash-bonuses, and alternative schedule), which employees personally value. The reward must be given in sufficient amount to encourage future performance so that the employees put forth efforts to receive it.

The issue of timing and likelihood of rewards relate to the link between performance and outcomes. An effective reward system must strengthen this link. A high likelihood of actually receiving the rewards with appropriate timing (no excessive delay between effective performance and receipt of rewards) should always be borne in the management's mind.

The issue of fairness is related to pay satisfaction, but they are not the same thing. Measuring pay satisfaction certainly includes perceptions of the fairness. Satisfaction depends on the amount of rewards received and how much is still desired. Fairness depends on a comparison of the rewards one receives to one's contributions relative to some comparison standards. In brief, rewards must be given to employees with a genuine concern for their perception of fair treatment (Cascio, 1986).

5.2.3. The Program Coverage

The improvement programs proposed here are addressed to overcome the existing critical dimensions in the three levels of performance of the terminal. The programs, therefore, cover the needs to improve the following sub-system of human resources management (HRM) system:

- Personnel function
- Placement policy
- Career planning
- Motivation policy
- Training system
- Performance appraisal system
- Performance feedback system.

5.2.4. A Special Consideration: Privatization

The Indonesia Port Corporation II (IPC II), as the representative of the Indonesian Government, successfully privatized the Tanjung Priok Container Terminal (TPCT) in April 1999. Grossbeak, a company owned by Hutchinson Whampoa (HW), has bought 51% of the terminal that since then changed its name to the Jakarta International Container Terminal (JICT). The remaining shares are held by IPC II, one national share which reserves it the right to determine a variety of JICT policies (Indonesian Business Watch, 1999).

An external factor that bore out the privatization was the economic deregulation package issued in mid 1995 by the Indonesian Government. The package enables state-owned companies to enjoy a freedom in making decisions and finding investment. Since then private sectors participation in state-owned companies' businesses has become more significant. Moreover, the state-owned companies, including the IPC II, became more independent from administrator intervention and other bureaucratic situations, which often lead to a contra-productive payoff to their efficiency.

The privatization is considered as happening at the right time in terms of providing solution to two critical problems. The first problem is lack of investment to finance development projects of the terminal. This problem was solved since Grosbeak had to pay US \$215 million in cash and provide technical assistance and software worth US\$28 million. Together with IPC II, Grosbeak will have to double the capacity of the container terminal within its first five years of operation. JICT will also invest US\$340 million over a twenty-year period.

The second problem to be solved is the terminal inefficiency that is manifested in a relatively high waiting time (WT) and berth occupancy ratio (BOR). Indeed in the last five years the terminal has been successfully improving its performance. The WT declines about 9% per year and the score in 1994 was 15.17 hours became 10.37 hours in 1998. Although the efficiency in utilization of facilities is improving every year, e.g. in 1994 the BOR was 71.23% and last year was 67.21% (TPP, 1998), as discussed earlier, it is still sub-standard when compared with the ideal standard of efficiency. The involvement of private actors is expected to give a significant contribution in managing the terminal to be more effective and efficient.

The change of status from a state-owned operator to be a private company imposes the terminal to adapt its internal system to the change. But adaptation always takes time. There will be a change in personnel management system due to the fact

that new comers from the investor side will fill half of the manager and executive positions. Some reports said that as the major stakeholder, Grossbeak has a right to make decisions about the internal system of the company together with IPC II. The consequence of this is the performance system will be likely to change or to continue implementing the existing one. Considering this change, the following discussion on recommending improvement programs will cover the possibility of the change of the system.

5.2.5. The Modes of Implementation

It is of importance to consider that the following programs of performance improvement are integrated; that is why they are formulated in packages. The programs are proposed in two modes of implementation, namely the adaptive change package and the total change package. The earlier discussion identified seven sub-systems of HRM that deserve improvement actions. Therefore, each of the packages contains seven programs to cover improvement needs on those seven sub-systems of HRM.

According to Ma (1999a) this division of modes of implementation could be seen as a probabilistic decision making. In this kind of decision making, there are a number of conditions to happen in the future. For the sake of simplicity these conditions are called states. The possibility of some states to happen can be estimated and even one of the states that is surely to happen could be identified in advance. In the case of the terminal, the states are that the new management will continue to implement the existing system or establish a completely new system.

The items of content within the two packages are similar. One thing that makes them different to each other is the mode of implementation. The adaptive change package is based on an assumption that the existing HRM system is still sufficient and no reason to be abandoned. The cause of performance deficiency is not because the system is totally irrelevant to the current situation of the company but rather because it

is not consistently implemented. The improvement can be done by primarily empowering the HRM/personnel function and modifying some sub-systems of the HRM system to upgrade their effectiveness.

The total change package is rather pessimistic to the existing system. The poor performance of HR is caused by the poor HRM system, which contains irrelevant sub-systems. The existing system is no longer sufficient to be implemented in the new form of organization. As a private company, the terminal needs a sound HRM system that enables it to optimize the utilization of its human resources in a highly motivating environment. Thus from the total change point of view, a completely new HRM system is a must.

5.2.6. The Alternative Programs

5.2.6.1. The Adaptive Change Package

In order to obtain the best result of implementation, each of the following programs within this package needs to be preceded by a study to examine the current implementation of the related parts of the HRM system. The study will enable the management in determining the necessary details of the program implementation. Due to the partial change addressed by these programs, the study could be done by internal staff without hiring any external consultants. This means that it would save a lot of money.

5.2.6.1.1. Empowering the Personnel Function

- Renaming the Personnel and General Affairs Division (PGAD) to be the Human Resource and General Affairs Division is the first step in empowering the personnel function. This new name reflects the change of orientation of HR/personnel function from merely administrative to development orientation. The new name is in common use of new-modern organizations that highlight the importance of

human resources development as the key of organization's success (Nadler & Nadler, 1989).

- Restructuring the organization of PGAD by promoting the two sub-sections under the Personnel Section to be sections is the second step. This proposal is based on the actual workload of the Personnel Section that it even can stand as a division. Under its new name, the human resources function will have five sections as shown in Figure 5.1. The general service is put together in the same section with HR administration since their work often overlaps each other.

An Alternative Structure of Human Resources Function

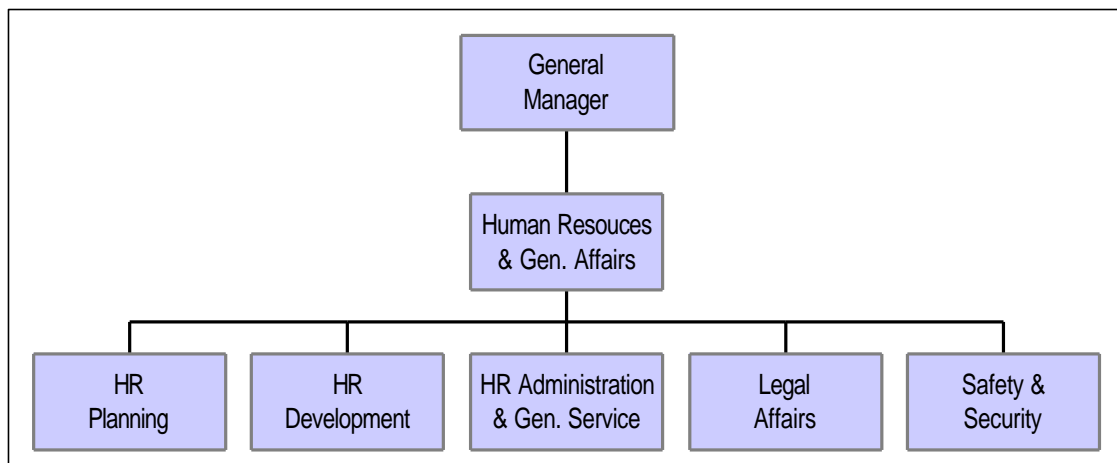


Figure 5.2

5.2.6.1.2. Rationalizing Personnel

- Rationalizing personnel means to place the rational number of personnel in every function. This is commenced by identifying the actual needs of personnel in every function of the organization. The HR Planning section together with representatives of every function conducts the personnel-need identification.

- In order to solve the overstaffing problem, the management could offer an early-retirement to employees who are above 45 years old or considered as unproductive.
- Another solution to the overstaffing problem is provision of new jobs that absorb a significant number of employees from the overstaffed divisions. Job creation could be done by opening a container service unit that provides services to container boxes, such as cleaning, maintaining, repairing containers and installing new apparatus to reefer containers. According to the experience of Port of Arhus, Denmark³, such a unit could absorb more or less 200 employees.

5.2.6.1.3. Redefining Career Path for Operators

- Conducting a study to review the existing career path and to find an appropriate model to be implemented as career path for operators in the new company's situation begins this program. A team consists of staff from HR Planning, HR Development and every division will conduct the study.
- Providing a counseling program on career development for the operators to permanently help them in planning and developing their careers becomes the next action. This program requires full support from managers in all levels. Moreover, the managers should be involved in the program by training them as employees' mentors. In a big company like IBM the mentoring program was implemented in 1995 under a special program called the *individual development program*. The mentors act as communicators, counselors, and advisors to the employees who help them in setting their individual goals and how to achieve them (Fransisca, 1999, Mitchell & Larson, 1987).

³ Mr.Knud Vang Nielsen from the Board of Management of Arhus Stevedoring Company delivered this information to PM Class 1999 during their field study to the Port of Arhus, June 15-16, 1999.

5.2.6.1.4. Refreshing the Implementation of Performance Appraisal System

- Due to the fact that a new performance appraisal system has been implemented since early this year, in order to socialize it the management needs to deliver a training program to all employees. The training should deliver the necessity of the system in measuring employees' performance and how the measurement should be done. The employees should be clearly taught how to set their goals in accordance with functional goals of the divisions they belong to.
- The organization should guarantee the provision of all means and resources to ensure the success implementation of the appraisal system, such as forms to be filled and the result of individual appraisal and functional evaluation.

5.2.6.1.5. Refreshing the Implementation of Training System

- The new status as a private company allows the terminal to do all work within the training system, such as planning, delivering and monitoring the result of training programs. Previously the terminal was only allowed to propose a training plan to be decided by the IPC II Head Office. The IPC II Head Office did the rest of the training activities. The existing training system has all the necessary means for facilitating the management to independently plan any training that is required by the employees.
- Based on the result of performance appraisal and the actual observation on-site, the HR Development section identifies the training needs for employees in all levels. The underlying intention of all training plans is to improve the performance and to prepare the employees for future jobs.

- The terminal could send the employees to the Port Training Center (PTC)⁴ or other training organizers for ex-house training. In-house training could be delivered in cooperation with PTC or others.
- In order to ensure that the investment on training will gain its return, the management needs to strictly monitor the implementation of new skills/knowledge learnt from the training to the real jobs. The monitoring could be integrated with the performance appraisal process.

5.2.6.1.6. Redefining the Motivation Policy

- Because the terminal becomes a more international organization since a foreign investor bought half of its stakes, the management needs to review the pay structure and level. There should be a way to adapt the pay structure to the change where some of the executives and managers would be foreigners. Adapting the pay structure is meant to provide an attractive remuneration to staff both foreign and domestic. It should also reflect the fairness principle that applied to all staff on operational, supporting and administrative groups.
- Apart from the pay structure, the provision of rewards as discussed earlier should be arranged more often, i.e. the selection and recognition of the best performer should be given in monthly basis.
- Some social benefit programs also need to be reviewed to upgrade their effectiveness in motivating the employees.

5.2.6.1.7. Redefining the Performance Feedback System

- Actually a performance feedback is included in the performance appraisal system. Through the mentors, the feedback is delivered to and discussed with the

⁴ Port Training Center (PTC) is a daughter organization of IPC II which is situated near the port area. PTC provides almost all kind of training needed by the port employees and starting from 1997 it offers a

employees to clarify why and how their performance as was recorded in the result form. The mentors show the employees the critical dimensions of their performance, make them aware of their weaknesses and reinforce their strengths.

- An effective performance feedback system needs well-organized documentation. Therefore, the management should ensure that all necessary documents about employees performance are well provided and managed by the HR Administration and General Service with full support from all divisions.

5.2.6.2. The Total Change Package

Similar to the previous package, this package requires the management to conduct a preceding study for each of the following programs. Due to the scope of change implied, the study seems to be considerable and needs a lot of time. Ordinarily to conduct such a study, the management needs to hire a group of external consultants that devote their expertise particularly to the study. It would be very hard for internal staff to conduct the study since at the same time they have to do their routine jobs. If they are deployed to do the study, the daily operation of the terminal will suffer.

5.2.6.2.1. Restructuring the organization

- The whole organization should be restructured instead of only the personnel function. Firstly, the management needs to review the existing mission statement of the organization. If it is out of date or does not reflect a new organization strategy, the management could set up a new mission statement. The new mission statement should reflect the fulfillment of customers' and organization's requirements. It should also reflect the organization development in keeping pace with change.

simulation training for container crane operators to IPC I – IV and other port operators.

- Secondly, the management should determine functions that facilitate the organization to manifest its mission statement. Are the existing functions still sufficient or needed to change? As the functions established, their goals should be defined too. Following the functions, the lower layers of the organization structure should also be determined.
- Thirdly, the process and procedures should be set up to ensure that the work within and between functions flows smoothly in their efforts to accomplish the goals.

5.2.6.2.2. Reallocating Human Resources

- Reallocating human resources to the appropriate functions is a part of organization restructuring. Once the new organization structure is established, the human resources are allocated to all demanding functions. The HR allocation is based on the evaluation of actual requirement of every function which is included in the study. It is expected that this HR reallocation will solve overstaffing and understaffing problems in some of the functions which are caused by inappropriate allocation strategy.
- Another feature of the evaluation of HR actual requirement is the necessity to rationalize the existing number of personnel. It often leads to lay off a number of personnel who are considered as unproductive or poor performers. The management might offer early retirements to those unproductive personnel. Contrary to the previous package, this package does not create new jobs for the redundant personnel. The main focus of the program is to allocate the rational number of employees for every function according to its actual requirement, not more or less.
- In case some units within the functions need additional employees, the management with this approach will recruit new employees as required. It would be better to obtain new energetic recruits who bring new blood the organization

than to utilize the less productive people. The reason for this is because the organization is a private company which is supposed to utilize all available resources efficiently and effectively rather than just provide employment to people.

5.2.6.2.3. Establishing a New Career Management System

- Establishment of a new career management system is also a consequence of the organization restructuring. Once the organization structure changed, it will be followed by a change in all jobs within its functions. It imposes the management to redefine a career management that accommodates the change. Since the organization is a completely private company, the existing career management system seems to be no longer sufficient with the requirements of the new jobs.
- The developed ports like ECT and RMPM develop their employees to follow a diagonal career path beside the traditional vertical and horizontal paths. The diagonal path means that an employee may move to either higher or lower position in other departments on the basis of competence⁵. This system has a positive impact on improving employees' performance due to the broad possibility for the employees to be developed.

5.2.6.2.4. Establishing a New Performance Appraisal System

- Since the organization was restructured and new goals were set up, establishing a new performance appraisal system is essential. It is because there would likely be a new performance standard for every job.
- A study needs to be conducted not only to review the existing system but also to find the most suitable system to be implemented in the new organization setting.
- Consequently, the management should ensure the provision of new appraisal forms and other resources.

5.2.6.2.5. Establishing a New Training System

- Due to the fact that the terminal is no longer dependent on IPC II Head Office in training affairs, the management needs to establish a new training system. The new system will remove the unnecessary training programs from the list that used to be conducted under the old organization, which to some extents still reflect the bureaucratic government style. The programs on the list are only the ones that are really needed to improve employees' performance and to develop them to future jobs.

5.2.6.2.6. Establishing a New Reward System

- Establishing a new reward system is required to adapt to the new organization structure. The management needs to set up a new pay structure and take into account the average level of compensation adopted by other private companies. Another consideration is the more heterogeneous employees including domestic and foreign staff. In addition to the monthly compensation, other financial rewards such as bonus and incentives need to be reset.
- The management also needs to determine the non-financial rewards to be given to employees in the new format of environment with new expectations. Along with rewards, the penalty to discourage poor performers should also be redefined. The appropriate reward-punishment system would only be obtained by a sound examination study on the present situation of the company and the development possibility in the future.

5.2.6.2.7. Setting Up a New Feedback System

- This program is a back up of the performance appraisal system but is not necessarily less important. A new feedback system is set up based on the new performance appraisal system and facilitated by the new emerging culture within the organization. Managers and supervisors play a role as mentors who discuss

⁵ This information is also obtained from Ms. De Vos, RMPM.

with their staff about the graphic record of their performance for a certain period of time. As mentioned by Fairbank and Prue (1982), these graphic records enable the employees to examine their productivity behaviors from time to time. It really has a positive impact on performance improvement.

5.3. Choosing the Most Feasible Alternative

Implementing programs formulated in the two packages means implementing change into the organization. Actually change is a necessary way of life not only to an individual but also to an organization containing individuals. Davis and Newstorm (1985) found that although the change covers only a small part of the organization, it affects its whole system. It is because the organization has equilibrium in its social status. The people within the organization develop an established set of relations with their environment. They learn how to deal with each other, how to perform their jobs, how to share resources, and what to expect next. Equilibrium exists; employees are adjusted. When change comes along, it requires them to make new adjustment as the organization seeks a new equilibrium. When employees are unable to make adequate adjustments, the organization is in a state of unbalance, or disequilibrium. The objective of HR management regarding change is to restore and maintain the group equilibrium and personal adjustment that change upset.

The selection of the most feasible alternative between the adaptive change package (ACP) and the total change package (TCP) should take into account the impact of the change on the employees and the organization. The common method applied in such a selection is cost and benefit analysis. Unless it can provide benefits above costs, there is no reason for change. It is illogical to emphasize benefits while ignoring costs. The organizational goal is always benefits are greater than costs ($B > C$).

In determining benefits and costs, all types of each must be considered. There are three types of cost-benefits, namely economic, psychological and social cost-benefits. It is not very practical to reduce psychological and social costs-benefits to numbers. Almost any change involves some psychological loss because of the strain that it imposes on people as they try to adjust (Davis & Newstorm, 1985). The social consequence of a change is closely related to psychological costs since the individuals who constitute a group may surely be affected by the change.

In terms of economics, the cost and benefits of a program that caused change usually refers to the cost of expenditure and the return of every dollar spent in the program. Considering the scope of the analysis in this subject, which is very broad, the cost-benefit analysis in the following discussion is mainly addressed to the study that precedes every program proposed above. Under the TCP the study involves external consultants, as discussed earlier, who devote their time and resources to examine the particular part of the HRM system. An ACP study seems to be less costly since it could be done by internal staff. The main cost of the ACP study is team members' wages. A team leader could be paid around Rp. 2 million per month and for the team members could be from Rp. 1 – 1.5 million. If the management assigned a teamwork containing one team leader and 7 personnel members to do a six-month study, the cost is as follows:

Team leader	=	1 x 6mth x Rp. 2,000,000,-	=	Rp. 12,000,000,-
Members	=	7 x 6mth x Rp. 1,500,000,-	=	<u>Rp. 63,000,000,-</u>
			=	Rp. 75,000,000,-

The figure of Rp. 75,000,000.- is only about one-fourth if the management hires an external consultant team that contains the same number of people.

Time is also an economic cost-benefit parameter. The study in the TCP apparently needs more time than the one in the ACP. It is because the TCP imposes

the management to conduct a complete and detailed study of almost the whole of the HRM system. After the study has finished and the new system has been established, the next step, which also takes time, is familiarizing all employees with the system. Along with the new system familiarization, the gradual implementation of the system is commenced. The implementation requires adaptation of all units to the change. And adaptation takes time as usual. The ACP seems to be less time consuming due to the fact that it only needs to conduct a study of some parts of the HRM system. Since the objective of this package is to renew the implementation of the existing system, the study only covers the most critical parts of the system in order to create solutions for them.

Every TCP study, which is in fact very costly, is expected to produce a sound practical recommendation. A special feature of the TCP is the redundant of the non-productive employees and recruiting new energetic employees. The consequence of this is the company should expend a significant amount of money for replacement costs and training costs. The replacement costs consist of two main components, namely retirement costs and recruitment cost. Retirement costs also consist of two components, i.e. retirement bonus and pension. Retirement bonus is a bonus package in cash that is worth about a certain years of normal salary. This package is only given to those who choose to get retired early but not to those who naturally achieve their normal retirement time. For the latter employees there is only pension which is given on a monthly basis.

The training costs consist of induction training delivery cost and apprenticeship cost. The induction training is a package of training programs that addressed to the new recruits to prepare them to the new working environment. The apprenticeship is also a kind of training that is conducted in the real work setting after the induction. The objective of the apprenticeship is to familiarize the new recruits to their new jobs, colleagues and working mechanisms.

The benefits of implementing the redundancy of non-productive employees as suggested by the study result are saving cost and generating higher income. It is apparent that the terminal spends a lot of money for the replacement costs and training costs. However, the terminal will be able to save more from avoiding the probable costs that occur because of human factors. In other words, the redundancy of non-productive employees means avoiding loss from the poor operations due to the poor HR performance. In addition to the cost saving, the terminal will be able to gain more income due to the improvement of the HR performance and the increase of the terminal's productivity.

The implementation of the ACP study result seems to have almost the same feature with the one under the TCP. The management should also expend a certain amount of money to cover replacement costs and training costs due to the rationalization of the personnel of every division. Nevertheless the costs are not as high as the ones in the TCP since the management does not have to lay off a great number of employees. Another cost that occurs as a consequence of job creation is the costs of the establishment of new service points. The latter costs include training costs for conducting the necessary training to prepare the transferred employees to their new jobs.

The kinds of benefit that could be gained from the latter activities are similar to the ones in the TCP. Firstly, the terminal could save costs by reducing the possibility of human errors to occur due to poor performance. Secondly, the incomes from the existing operations are expected higher than the previous ones because the employees are performing better. In addition to these benefits, the terminal could gain new incomes from the new service points.

Regarding the psychological and social costs, the TCP is viewed as causing more costs than ACP since it proposes a total change which covers the whole system of the organization. Personnel redundancy and structural change will lead to a

psychological shock to those who lost their jobs. The organization will also be shocked due to the restraint in its equilibrium. And on the employees' side, in this turbulent period after being hit by economic crises, many people became unemployed at almost the same time. Job cutting would be a painful option for employers and employees as well. Its impact will spread to a broader scope in the social system. Those who lost their jobs and can not easily find a new one will despair. They lost their social status too. Their families will also suffer from this sudden unemployment, economically and socially.

The ACP takes a more adjusted way of implementing the change. Instead of laying off all the unproductive employees, it prefers to rationalize the personnel by offering early retirement and reallocating the employees to other units. A job creation becomes an interesting way-out since it avoids redundancy and giving a chance to diversify the organization's business. Another fact of the ACP is that it gives time allowance to the organization to adapt to the change. As a new private company, the organization needs to gradually rebuild its system rather than suddenly jump to a radical change. In addition to avoiding internal equilibrium lost, the ACP seems to enable the organization to avoid social shock.

Considering the cost and benefit aspects of the implementation of the two packages, the ACP seems to be the most feasible alternative. The management could choose the ACP to improve the existing performance of the employees. But in the long run the management needs to apply a change that covers the whole part of its system. Therefore, the TCP becomes the next alternative to choose.

5.4. Summary

This chapter has devoted its discussion in identifying the critical dimensions of performance within the Three Levels of Performance perspective. In the organizational level, it has identified a critical dimension which is manifested in the inappropriate

allocation of workforce into divisions. This inappropriate allocation of resources leads to overstaffing in some units and understaffing in others.

In the process level, the critical dimensions is manifested in the inappropriate design of the organization, particularly in personnel function; the disproportion in staff composition according to their job levels; the insufficient career planning for operators; and the inconsistent implementation of the training system. Lack of understanding among the staff members to the goals of their jobs in relation with functional goals, lack of adequate performance feedback and the insufficient motivational program are the critical dimensions of performance in the job/performer level.

In order to overcome these critical dimensions, this chapter has proposed some programs of performance improvement. The basic concept of the proposed programs is highlighting the management roles in three areas of responsibility, namely performance definition, performance facilitation and performance encouragement. The programs cover the needs of improvement on seven sub-systems of HR management, namely personnel function, placement policy, career planning, motivation policy, training system, performance appraisal system, and performance feedback system. A special consideration to the implementation of the proposed programs is the privatization and its impacts on the internal system of the organization.

The programs are closely related to each other because they deal with the seven sub-systems of HRM and this is why they are formulated in a package. There are two packages of implementation, namely the adaptive change package (ACP) and the total change package (TCP). Each of the packages contains almost the same type of programs. What makes them differ to each other is the mode of implementation. The ACP implements a change to the organization gradually and only covers some part of its system, while the TCP seems to be more radical and cover the whole system.

In order to choose the most feasible alternative, the cost and benefit analysis was applied. The analysis contains evaluation on three main components of cost-benefits, namely economic, psychological and social costs-benefits. Based on the cost and benefit analysis, the management should choose the ACP to be implemented in the short run and the TCP in the long run.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

The main message of speeches, discussions or papers on improving human resources performance has been fixing problems of the performers. The underlying assumption for this is that people are always on the root of all problems. Fortunately nowadays the ideas of looking at people as a part of a system becomes more and more approved. Human resources are no longer considered as an independent variable but together with other variables within the system contribute to the performance of the organization. The performance of human resources, then, is affected by performance of other resources.

The study of human resources performance in this paper was organized in three steps, namely selecting performance indicators, conducting the analysis with a particular method of measurement and making judgement on the level of HR performance. Following those three steps, this paper proposed seven programs to improve the existing performance of the organization. Firstly, two performance indicators were selected to be the basis of measurement, namely workforce availability and utilization. Actually those indicators were adopted from the common indicators which are used to measure performance and productivity of a port. Due to the lack of definitive research on this field that provide reliable HR performance indicators, these two selected indicators might most appropriately be viewed as a best-guess recommendation.

Secondly, the analysis is conducted by implementing the *Three Levels of Performance* approach. This approach identifies three levels of performance in where a number of variables that affect HR performance take place. Assuming the organization just like a human body, the first level, the organization level, stands as the basic “skeleton” of the major functions that constitute the organization and emphasizes the organization’s relationship with its market. The process level, the second level, is the musculature system of the body, which contains cross-functional processes. Ideally all the processes within the organization accommodate the fulfillment of the requirement of customers as well as the organization. The last level, job/performer level, represents the cell of the body that deals with jobs and the people who perform the jobs.

The result of the performance evaluation based on the two mentioned indicators and time series analysis showed that the performance of human resources of the terminal has been improving in the last five years. However, the improving HR performance is still not up to standard yet. The sub-standard performance of human resources is a result of some deficiencies in the three levels of performance. Critical dimensions of performance in a particular level of performance are related to critical dimensions in other levels since they exist as an integrated system. A proper understanding about this is essential in order to find appropriate solutions to the existing problems.

In order to improve the HR performance this paper proposed some programs that cover the needs to upgrade the effectiveness of the HR management system. Due to the fact that the management plays an important role in managing performance, the proposed programs highlight the management roles in three areas of responsibility, namely performance definition, performance facilitation and performance encouragement. The programs cover the improvement efforts in all levels of performance. The programs address their emphasis on the upgrading of effectiveness of the seven sub-systems of HR management namely personnel function, placement

policy, career planning, motivation policy, training system, performance appraisal system, and performance feedback system.

6.2. Recommendations

Recommending something always remains as a tough job since it requires a detailed description on how to work out things. In order to make it easier, the last part of this chapter organizes the recommendations into two agendas, namely the implication for practice and the implication for research.

6.2.1. Implication for Practice

Throughout Chapter Five the discussion emphasis has been on implication for practice. A number of programs have been proposed, and to implement them the management should consider the impact of privatization on the internal system and the external system of the organization as well. This special consideration imposes the management to set up a priority scale that arranges the programs according to their levels of urgency. The most urgent programs must be implemented prior to the others.

Another note is that obtaining full support from managers, superiors and staff members of every division or unit within the organization is essential. The management needs to ensure that the programs are socially approved and supported. Therefore, the implementation of the programs requires the management to involve all employees, especially managers and supervisors. It means that the management needs to establish teams which contain representatives from every division to conduct the program implementation. Each of these cross-functional teams should be organized under one command to avoid job overlapping. Working in a team provides many benefits not only for the achievement of the targeted goals but also for the satisfaction

of the team members. By establishing such teams, the terminal implements a matrix-style organization.

Briefly speaking, the management needs to translate the concept of program implementation into a more operational package by firstly prioritizing the programs according to their urgency and establishing the necessary team. Since the focus of implementation is improving human resources performance, the main responsibility is still in the HR function. So the HR Planning Section together with HR Development Section and HR Administration and General Services will be the organizers of the team. The team will collect all necessary data from every unit instead of depending on the existing data available in the Personnel Section.

The following table may give a brief example on how the programs are planned. The table contains the name of the programs, the estimate duration of implementation and the organizer in charge. The latter item means that the team is organized by the unit whose name is on the list.

**Table 6.1.
A Preliminary Plan of
Performance Improvement Programs**

No.	Program Name	Estimated Duration	Organizer In Charge
1.	Empowering Human Resource Function	3 month	HR Planning Section
2.	Rationalizing Personnel	3.5 month	HR Planning Section
3.	Redefining Career Planning	4 month	HR Development Section
4.	Refreshing Performance Appraisal	6 month	HR Development Section
5.	Refreshing Training System	6 month	HR. Development Section
6.	Redefining Motivation Policy	3-6 month	HR Adm. & Gen. Services
7.	Reestablishing Performance Feedback	3 month	HR. Adm. & Gen. Services

The estimated duration shown in Table 6.1 ranges from 3 to 6 months. The reason for this is as a relatively new company the terminal needs to have standards of performance immediately. Therefore, the implementation of programs should be done in a very short period of time. But it is only for the first action to obtain the general result of improvement. In the following period the management needs to expand the implementation to obtain more complete results. This is not going to stop since the management needs to establish a habitual incremental improvement culture within the organization.

Another recommendation to be proposed here is that the organization needs a special unit which holds research and development (R & D) functions. Almost all successful business organizations use their R & D as the think tank to develop their system and to upgrade their competitive advantages. The R&D unit will enable the terminal to effectively and efficiently utilize its resources since it conducts research and studies on the operational and managerial part of the organization. Today's research determines tomorrow's profits. Investment on R&D now probably will produce no income for a number of years to come. By allocating money into research, today's managers of the terminal increase current costs and lower their profits from operations so that in future years their companies may reap the fruits (Riggs et al., 1979).

The most possible scope of research to be conducted by the terminal, the R & D unit in particular, are applied research and development. The applied research is intended to discover new scientific knowledge and which have specific commercial objectives with respect to either products or processes. In this regard, applied research embraces four aspects, namely marketing, product, material, and equipment.

Research on marketing is to test consumer acceptance of products, to develop data for operational schedules and prices, to provide a source of new ideas for development. Research on material matters is to better use of resources, the real quantity and quality of equipment and facilities etc. Research on product matters

embraces the stimulation of new product concepts to fill the needs of customers and prospective customers, the process of actually developing new products, and the search for new and original uses for existing products. Allied with these activities are studies to open up new possibilities of by-product utilization. Research on equipment and process matters is usually directed toward the development of methods of the terminal operations, tools, and equipment, as well as handling devices that tend to increase productivity. The replacement of human skill and heavy labor by mechanical devices to better the operating efficiency and the development of methods and mechanisms for increasing the safety processes are both fertile fields for study.

Development, the second scope of the possible research, contains technical activities concerned with non-routine problems which are encountered in translating research findings or other general scientific knowledge into the terminal operations and services.

Last but not least, it is suggested that the terminal could publish a monthly bulletin for the employees. For the moment the terminal is dependent on the IPC II Head Office in providing such publication. The bulletin provides some benefits to both the management and employees. Firstly, the bulletin will be an effective media to socialize the organization policies particularly in improving HR performance. Secondly, the management could address the recognition to the outstanding HR performance through the bulletin. Thirdly, the management could ensure the optimum distribution of all necessary information to the employees in all levels via the bulletin. In addition to these benefits, the cost of publishing the bulletin is inconsiderable compared with its potential effect in improving HR performance and employees involvement in the development of the organization.

6.2.2. Implication for Research

The lack of research reports on human resources performance measurement in the port industry imposes the interested researchers to further explore this subject. The first issue to be raised is the selection of HR performance indicators. Selecting the appropriate performance indicators is essential to ensure that the measurement goes to the correct direction. Therefore, the questions for further researches are as follows: Are the existing indicators sufficient in measuring the performance? What are the main dimensions of measurement to be covered by the research? Is it possible to determine a HR performance indicator that is valid and reliable to be used to compare the performance of an organization to others?

The second issue is about the selection of data and the method of analysis. Researchers could take the methods used in other service sectors as a basis of comparison. They could also design new methods that are more suitable for the situation of the port industry. Measuring the human aspect of an organization is a tough job but the measurement needs to be done quantitatively and qualitatively.

The third issue is the standards of judgement to the level of performance. It is essential to determine the adequate standards as a basis of judgement. This requires the researchers to differentiate the standards applied for judging human resources performance and other resources performances. What criteria should be applied?

The fourth issue is the research focus could be reduced to be more specific. It would be of interest to address the study to a particular unit of the organization. It will enable the researchers to obtain a more complete picture of HR performance of the unit and to compare it with other units within the organization. This would be more worthwhile for the organization in efficiently improving its performance due to the specific figure of every unit it has. So that, the improvement programs could be addressed more precisely to the units which have performance problems.

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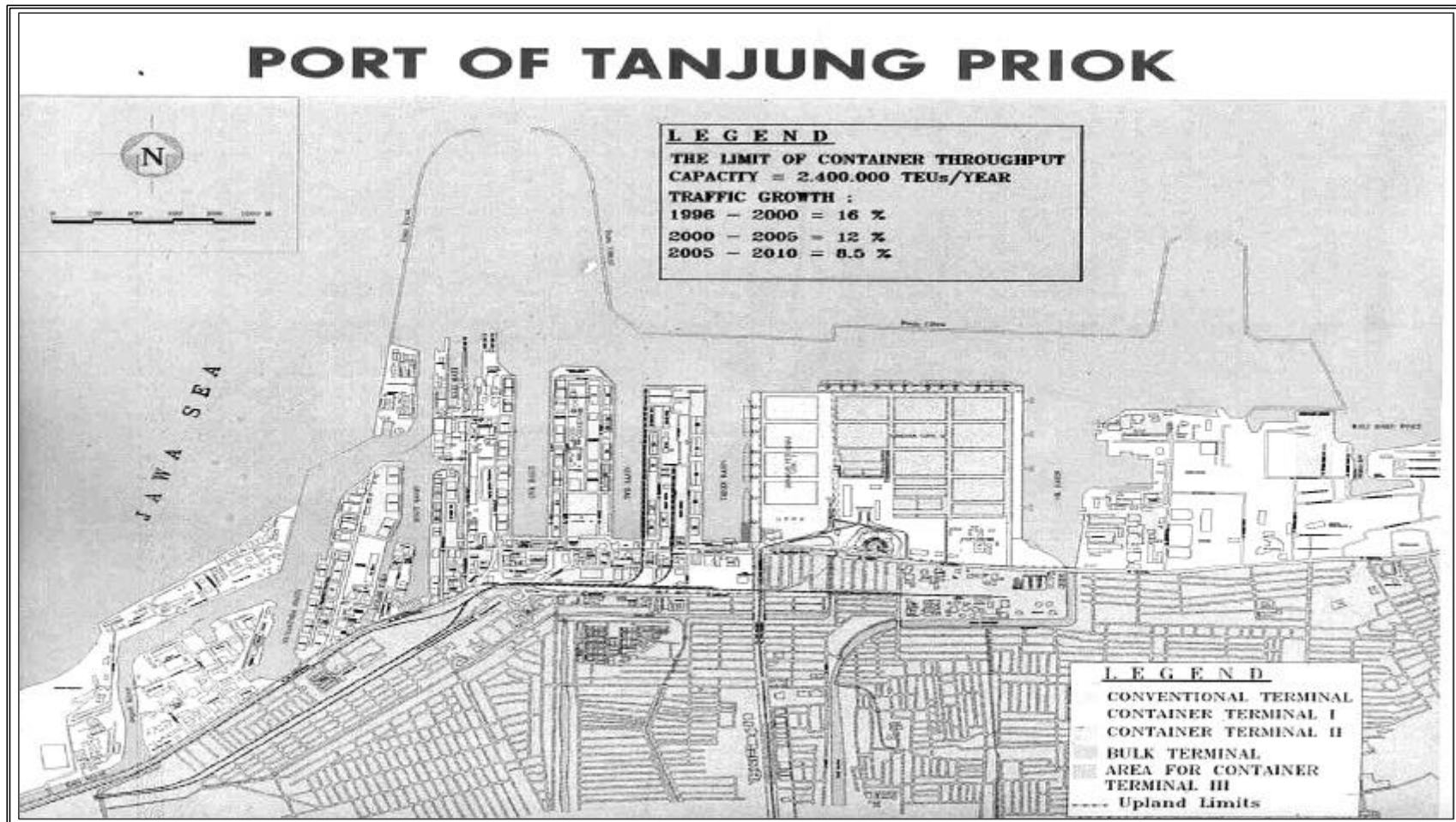
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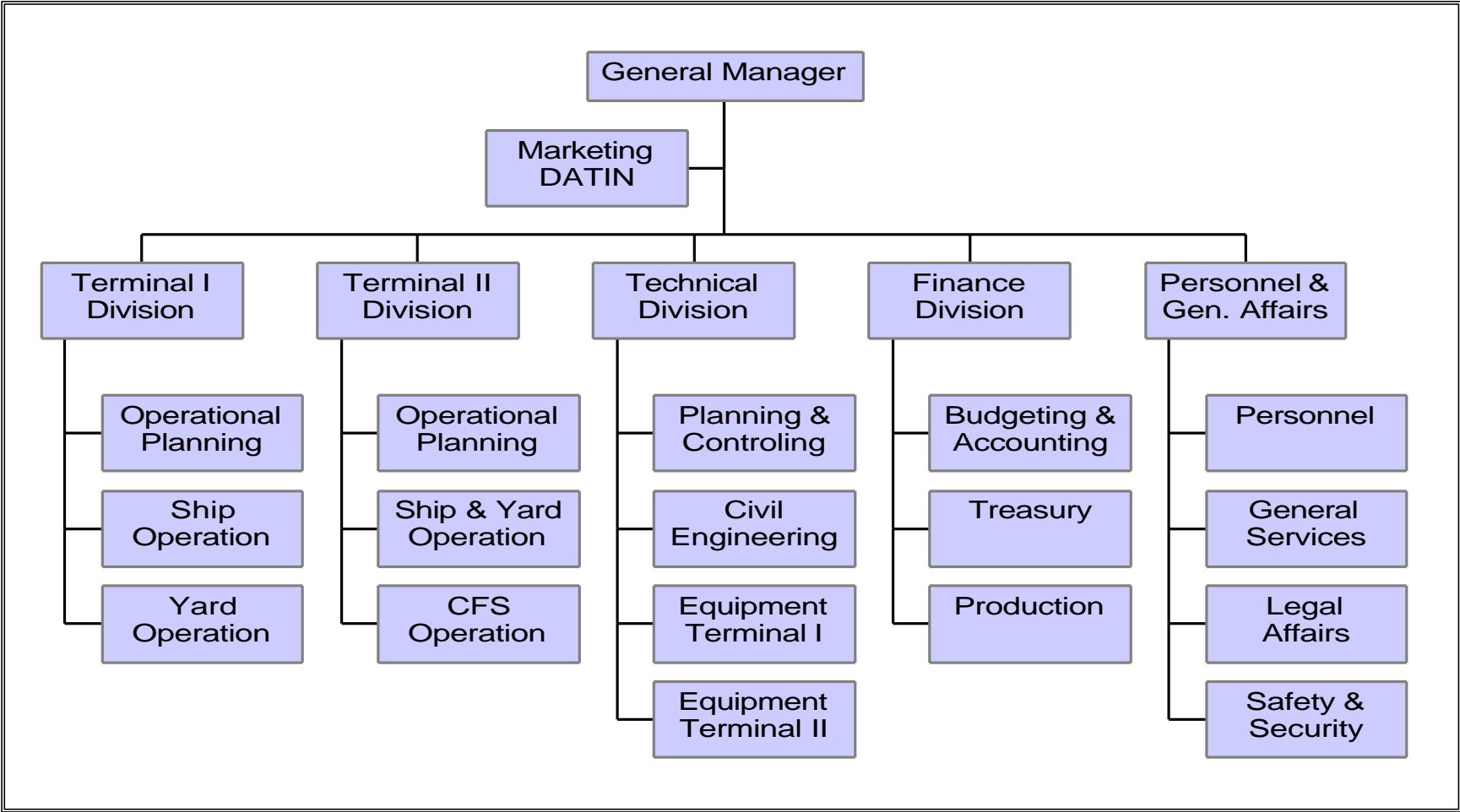
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Map of The Port of Tanjung Priok



The Organization Chart of Tanjung Priok Container Terminal



ANNUAL PERFORMANCE APPRAISAL

Period of Appraisal: _____

- 1. Employee's name :
- 2. Register number :
- 3. Job/Grade :
- 4. Job level :
- 5. Unit/Division :

No.	Appraisal Factors	Quarterly Appraisal				Annual Appraisal
		I	II	III	IV	
1.	Job Result	.....	.....	.....	.....	.....
2.	Job Efforts	.....	.....	.....	.....	.....
3.	Discipline	.....	.....	.....	.....	.....
4.	Leadership	.....	.....	.....	.....	.....
Total Score		.....	.....	.....	.....	.....
Category		.....	.....	.....	.....	.....
Remarks		.....	.....	.....	.....	.....

Recommendation of the result of this performance appraisal to personnel's:

- 1. Salary =
- 2. Career =
- 3. Incentives =