

CHAPTER 1 - INTRODUCTION

1.1 Background

PT. ABC is one of the companies engaged in the sale of heavy equipment, established in 1972. PT ABC has 20 branches spread across Sumatra, Java, Kalimantan, Sulawesi, and Papua as shown Figure 1.1.



Figure 1.1 Location Brand Office of PT. ABC

In 2022, there will be a change in business rhythm due to the end of the COVID-19 pandemic. The increase in the coal business has made IUP holders increase their production. This has an effect on increasing business both in the field of services and spare parts at PT. ABC Site Tanjung Enim. With this business increase, many customers invested in units, performed overhauls, and increased parts purchases for heavy equipment operations. This makes PT. ABC site Tanjung Enim have to increase manpower, infrastructure, and spare parts inventory. This change can be seen in picture 2 below, so in 2023 it will be a promising business opportunity.

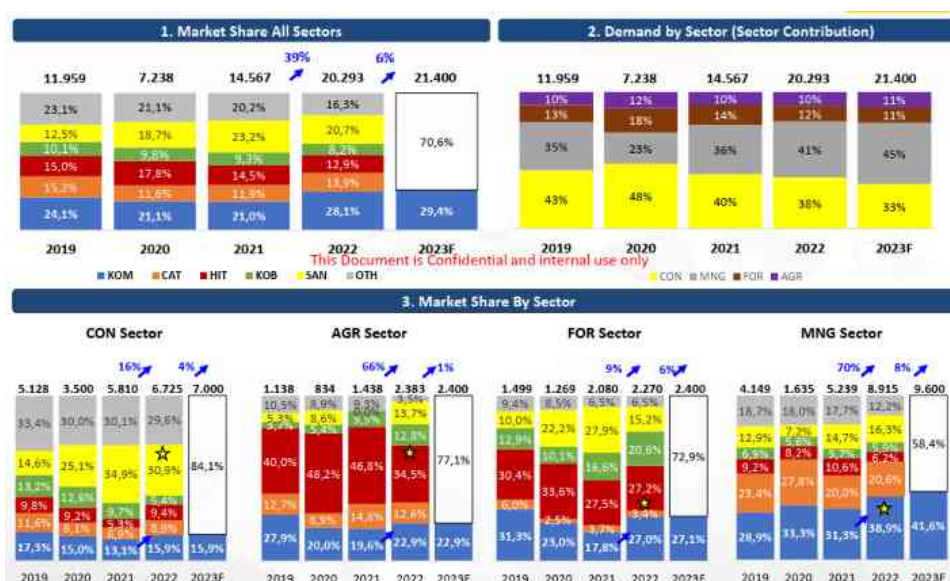


Figure 1.2 Market Share Selling Heavy Equipment

PT. ABC Site Tanjung is one of the sites located in the southern Sumatra area with a wide coverage area covering the western area including Lahat District, Pagar Alam District, and Empat Lawang. The area south of Batu Raja, Muara Dua, and Martapura. And the North area of Prabumulih and Pali.



Figure 1.3 Coverage Area PT. ABC Tanjung Enim

Data from Kementerian Energi dan Sumber Daya Mineral (ESDM) for the coal production target to reach 700 million tons in 2023, 37 million tons more than in 2022, may be found news at cnbc 20 January 2023. The South Sumatra region's coal production is also impacted by this.

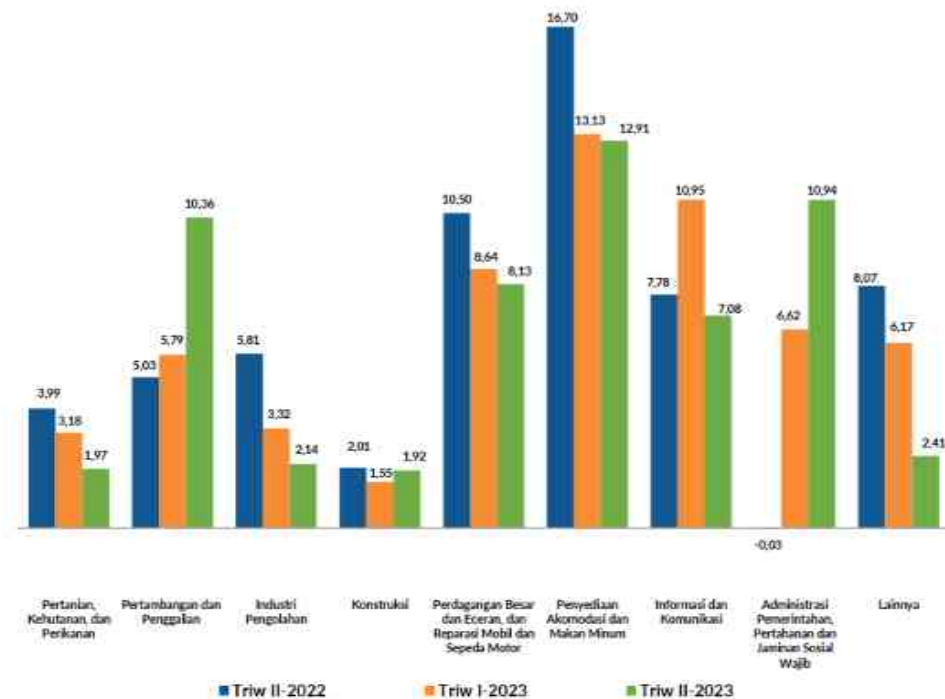


Figure 1.4 Pertumbuhan PDRB Beberapa Lapangan Usaha (q-to-q) (persen)

According to figure 4, the sector penetration rate for Triw II-23 is approximately 10%, 3rd. One of the areas in Sumatera Selatan where the economy is seeing growth is Kabupaten Lahat. Lahat's sole tambang facility is Tambang Bukit Telunjuk, owned by PT. XYZ, with a luas of around 30.400 Ha and a coal deposit of approximately 100.000.000 MT. PT. XYZ has an Overburden objective of 5.600.000 bank cubic meters (BCM), for 2023 and a coal aim of 2.800.000 MT. PT. XYZ has customers and affiliates across Europe and Asia.

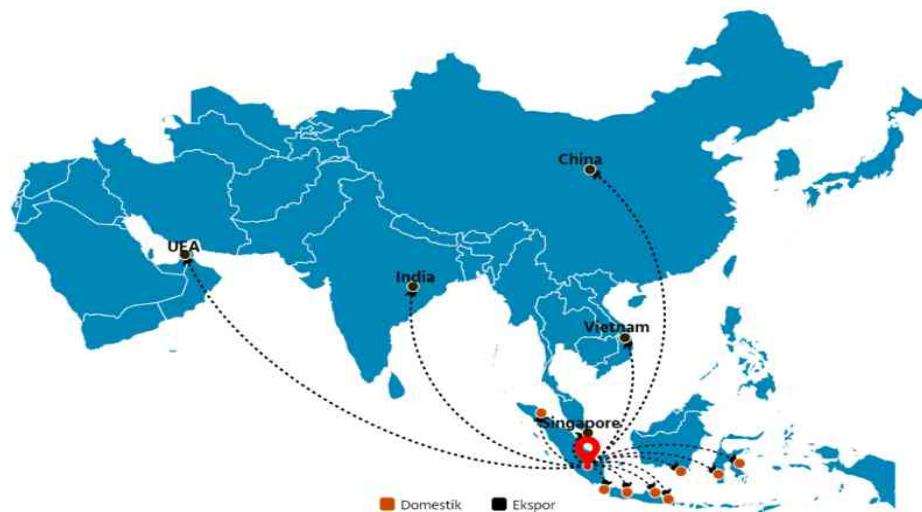


Figure 1.5 Customer of PT. XYZ

PT. XYZ has a population of approximately 30 dump trucks, 10 excavators, 2 bulldozers, 2 motor graders, and 2 wheel loaders.

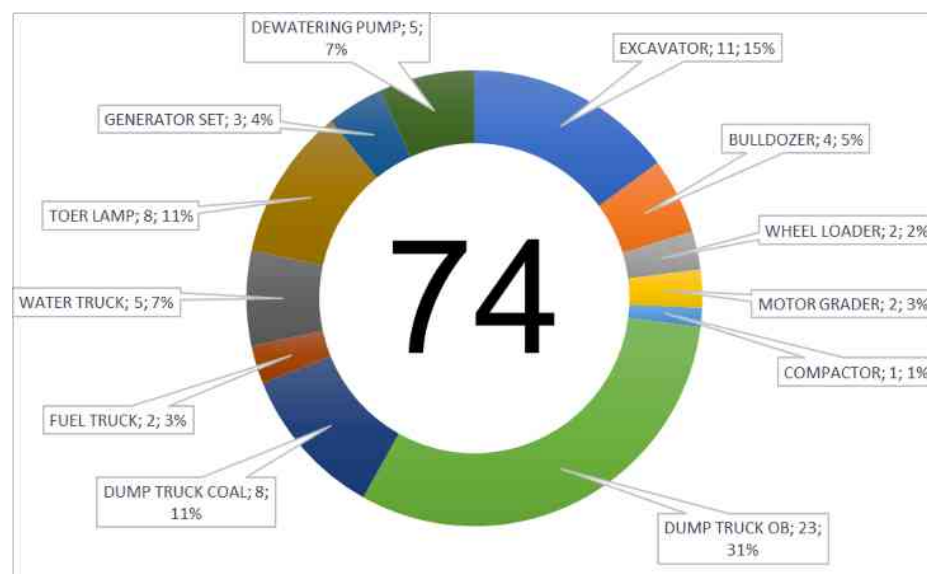


Figure 1.6 Unit Population PT. XYZ

Physical Availability (PA) is still below the intended 80 percent , thus causing production in 2022 not achieve.

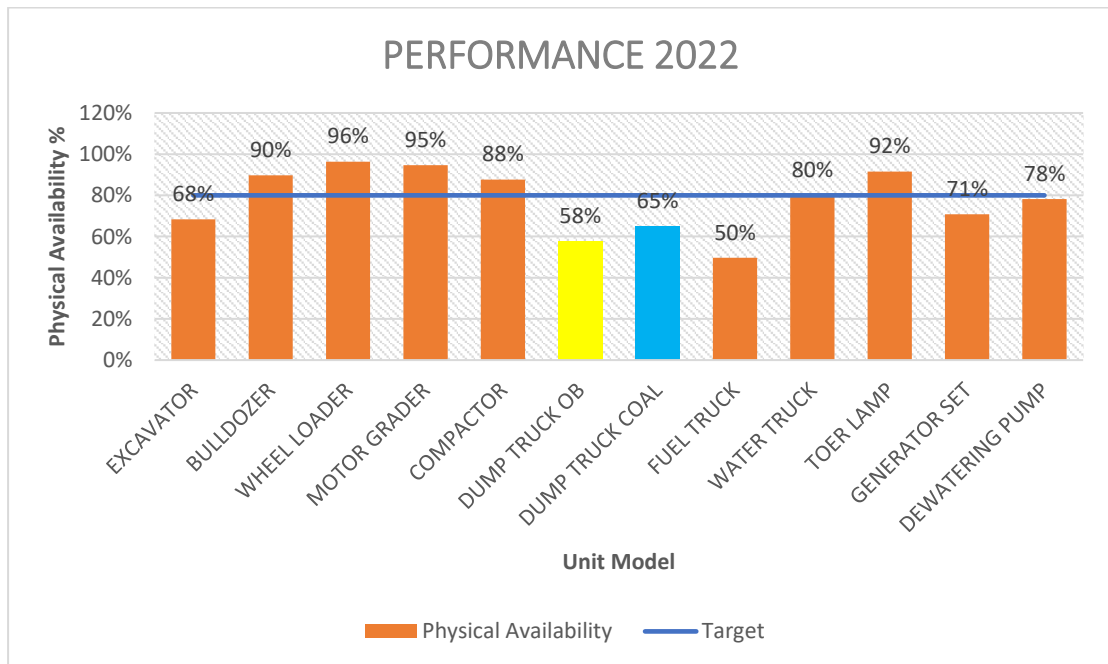


Figure 1.7 Physical Availability (PA) PT. XYZ

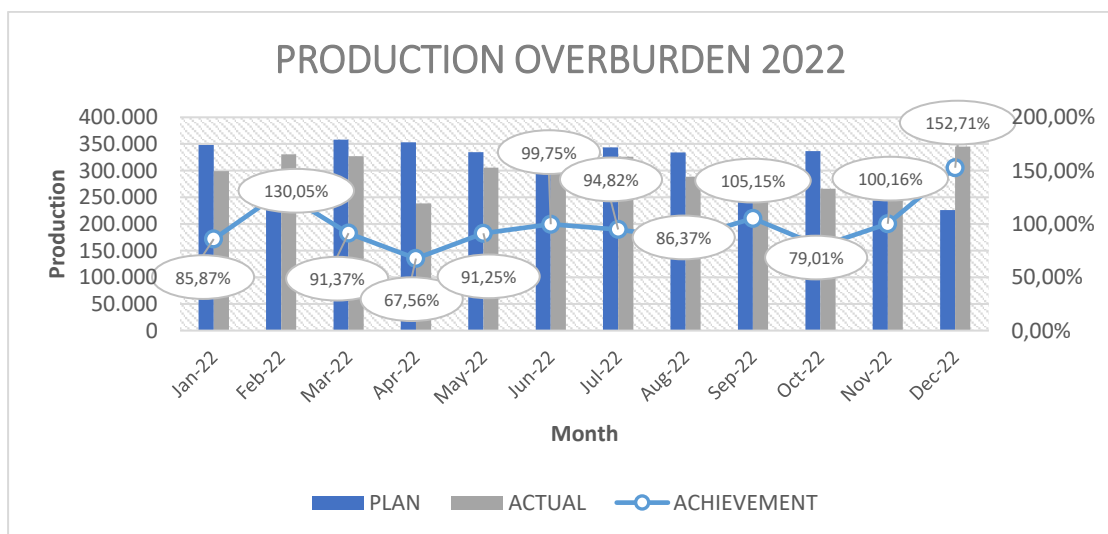


Figure 1.8 Productions Overburden 2022

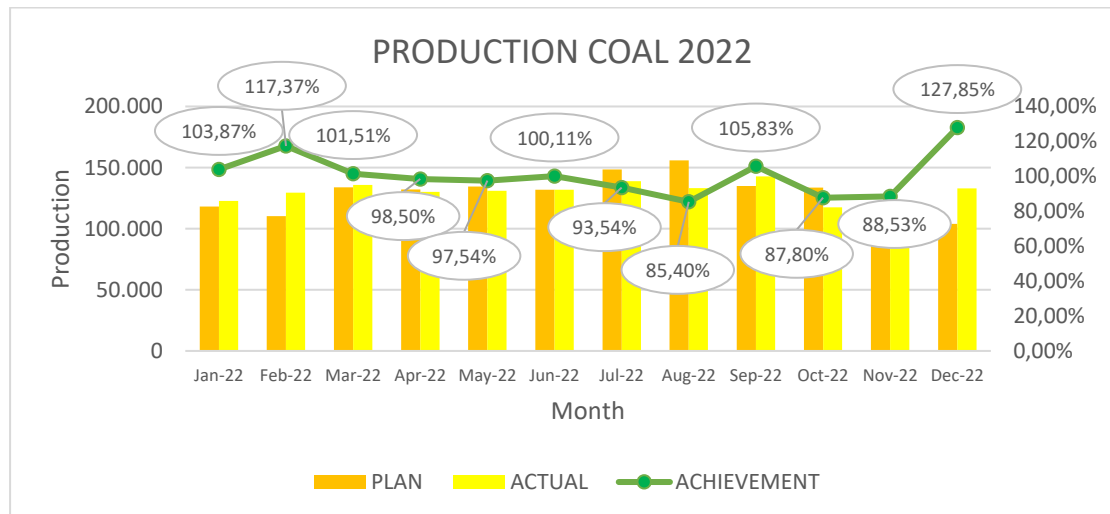


Figure 1.9 Productions Coal 2022

From the production data above, it can be seen that the average achievement in 2022 is 96.09%, or 3,613,902 bank cubic meters (BCM), and for coal production, it reaches 1,548,811 tons, or 99.71% of the 2022 target.

For the problem that occurs, physical availability is still below the target so that it results in production in 2022, so PT. XYZ intends to increase the physical availability of units in order to meet production targets in 2023. For the problems experienced by XYZ customers, PT. ABC has a Customer Solution Management (CSM) program. Customer Solution Management (CSM) is a strategy to build long-lasting relationships through serious efforts to help customers succeed by focusing on customer needs and appropriate innovation and improvement. With the Customer Solution Management (CMS) program, there are steps that must be taken to help customers, one of which is to make a customer relationship chart like the chart below:

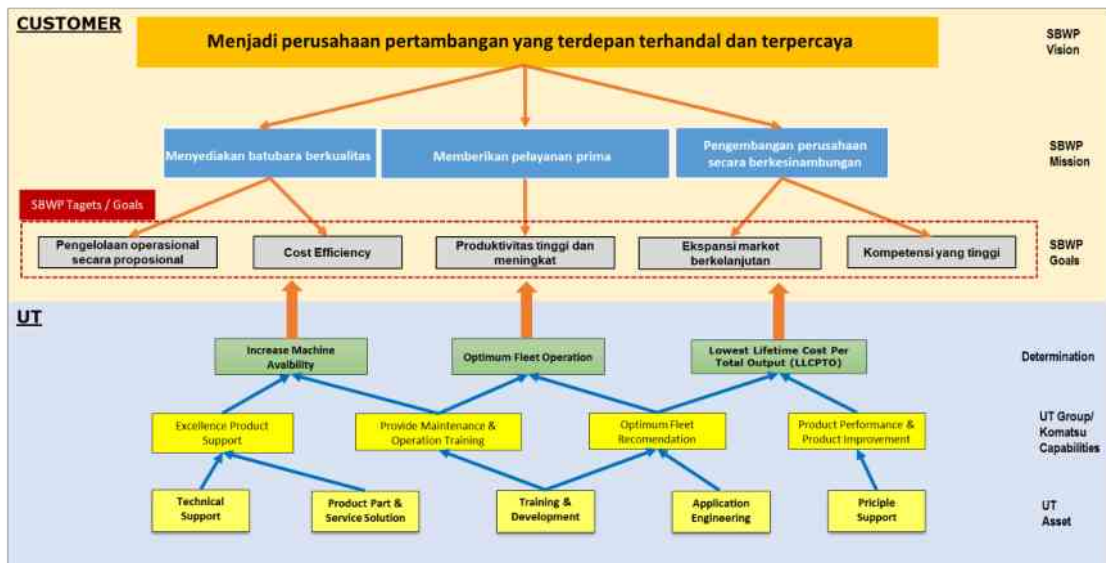


Figure 1.10 Customer Relation Chart UT With Customer XYZ

The figure 1.10 above shows the efforts of PT. ABC in assisting Customers to meet their targets. This research takes one of the efforts in the Customer Solution Management (CSM) program.

1.2 Research Problem

The problem in this study is that Physical Availability (PA) is still below 80 percent, causing production in 2022 not to be achieved, so improvements are needed to increase physical availability (PA). PT. ABC has a Customer Solution Management (CSM) program. Customer Solution Management (CSM) is a strategy to build long-lasting relationships through serious efforts to help customers succeed by focusing on customer needs and appropriate innovation and improvement as in figure 1.10.

1.3 Objectives

From the identification of the problem above, it is necessary to find the cause of physical availability (PA) at PT. XYZ is not achieved which causes production not to be achieved, and improvement needs to be made so that physical availability (PA) can meet the company's target.

1.4 Significance of Study

In this study, the Overall Equipment Effectiveness (OEE) method was combined with the Root Cause Analysis (RCA), 5 Why, and Focus Group Discussion (FGD) methods

to increase the physical availability (PA) of the SCANIA P360/P410 dump truck and reduce downtime so as to optimize production, which has an effect on mutually beneficial cooperation between PT. XYZ and PT. ABC. PT. XYZ can optimize production by using SCANIA P360 and P410, while there is an opportunity to demand additional units.

1.5 Research Questions

1. How can an enhancement in Physical Availability (PA) contribute to the improvement of Overall Equipment Effectiveness (OEE) in unit Scania P360/P410?
2. What is the impact of implementing the Overall Equipment Effectiveness (OEE) method on the enhancement of the physical availability of unit Scania P360/P410?

1.6 Hypothesis

Metode Overall Equipment Effectiveness (OEE), Forum Group Discussion (FGD), Fishbone, Root Cause Analysis (RCA), and Five-Why analysis will improve the physical availability (PA) of dump truck units at PT. XYZ.