

Proposed Land Management System Using Frameworks of The Balanced Scorecard Combination With Prism Performance Indicator Verification Study Case PT. Kaltim Prima Coal

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Abstract - PT. Kaltim Prima Coal (KPC) is the biggest coal mining company in Indonesia.. To anticipate global needs of coal, KPC had to increase its production and required Land Management. The actual number of Land Compensated has never inline with the number plan requested by the Mine Planning Division. There was a difference of about 40% on average the amount of Land Compensated.

If Land Management Department fails to provide land planned by Mine Planning, it will cause additional costs due to longer Road, excavation, and fuel costs. This condition reduces the profit earned by KPC's mining operations.

To determine the root of the problem, writer will use Fishbone Diagram Analysis and to solve them, use The Balanced Scorecard (BSC) Performance Management System. BSC can address many barriers to effective strategy. Writer also require Prism Performance Management Indicators. The Prism will confirmed the BSC to ensure the satisfaction of stakeholder. The ultimate goal of this application is to solve the land compensation problem and ensuring satisfaction of stakeholder inline with Good Mining Practice.

Keywords - Land Compensation, Land Compensated , Land Management Departement, Land Price, Mine Planning Department, Prism Performance Management, The Balanced Scorecard.

I. INTRODUCTION

PT. Kaltim Prima Coal (KPC) is the biggest coal mining company in Indonesia. KPC's operational location is in Sangatta and Bengalon. KPC's coal mine has a concession area of 84,938 hectares which was established in 1982. KPC employees reaches approximately 25,000 personnel (includes contractors). The emphasize of KPC's mining operational activities was environmental, social, and governance in Good Mining Practice to minimize the impact of it's operational activities. In order to anticipate global needs of coal, PT. KPC had to increase its production.

In line with the increase in production, the need for Land Management becomes crucial. Extenal Affairs and Sustainable Division as a Division that has a mandate in Land Management is at the forefront of providing land for KPC's operation. In carrying out its duties the Department of Land Management (LM) has many obstacles, so that several times it has difficulty in improving its performance.

From 2017 to 2020, the actual number of Land Compensated has never inline with the number plan requested by the Mine Planning Division. There was a difference of about 40% on average the amount of Land Compensated was not achieved. This was caused by several things that greatly affect the Land Compensation process. Likewise in terms of the cost of Land Compensation where the budget provided did not reach the planned budget

Mine Planning Division had been calculating the cost of this condition, which was if LM Department fails to provide land that had been planned by Mine Planning, it will cause additional costs due to changes in the Mine Plan such as: added longer Road Construction costs (due to twisting), additional excavation costs due to moving to a higher stripping ratio area (more excavated soil), additional fuel costs due to longer machine turning. The higher Land Price than the planned Land Price also causes cost for KPC. The average Land price (\$/ha) is always higher than planned, which is 26% over the average for 5 years. The discrepancy in the amount of Land Compensation provided by the Land Management Department with the Plan requested by Mine Planning causes additional costs for KPC's operations. This reduces the profit earned by KPC's mining operations

Writer will use Fishbone Diagram Analysis or Ishikawa Digram is an analysis tool that provides a systematic perspective on the causes and effects that arise or have a contribution to an effect. In order to solve the root cause of the problem, writer will use The Balanced Scorecard (BSC) Performance Management System. The BSC can be used to address many of the barriers to effective strategy execution. The Balanced Scorecard focuses on an integrated system of key performance indicators for critical success factors which divided into: Activity Measures (Internal Business Process Perspective and Learning and Growth Perspective) and Outcome Measures (Customer Perspective Financial Perspective).

The object of land compensation process was community or human. Therefore writer require another additional frameworks in Performance Management Systems, that is Prism Performance Management Indicators. The Prism will confirmed the BSC to ensure the satisfaction of stakeholder in the compensation proces

II. METHODOLOGY

Corporate strategy is the pattern of major objectives, purposes or goals and essential policies or plans for achieving those goals, stated in such a way as to define what business the company is in or to be in and the kind of company it is or is to be (Lynch, 2000). Corporate strategy is important because it deals with major, fundamental issues that affect the future of organisations. When an organisation makes major errors in corporate strategy, it will suffer the consequences, possibly risking its own survival (Andrews, 1971)¹.

In Corporate Performance Management Lecture, The BSC can be used to address many of the barriers to effective strategy execution²:

- Mission and strategy which is not known, actionable, and understood
- Strategy is not linked to departmental, team and individual objectives
- Strategy is not linked to resource allocation
- Feedback is tactical, not strategic
- The Balanced Scorecard focuses on an integrated system of key performance indicators for critical success factors which divided into:
 - Activity Measures:
 1. Internal Business Process Perspective
 2. Learning and Growth Perspective
 - Outcome Measures :
 3. Customer Perspective
 4. Financial Perspective

Figure 1. Frameworks

In developing a Performance Management System for Land Management for KPC's mining operational, the Balanced Scorecard Performance Management Framework will be used and then be confirmed with Prism Management Performance Indicators for Stakeholder Satisfaction. This Prism frameworks is to complete the analysis of The Balanced Scorecard which focuses on efforts to achieve land acquisition and cost efficiency of land acquisition. Prism Management Performance Indicators will see how the Satisfaction Indicators from Stakeholders can be met as well as Stakeholder Contributions can also affect Land Acquisition Achievement Performance. For more details, see the Performance Management Scheme below :

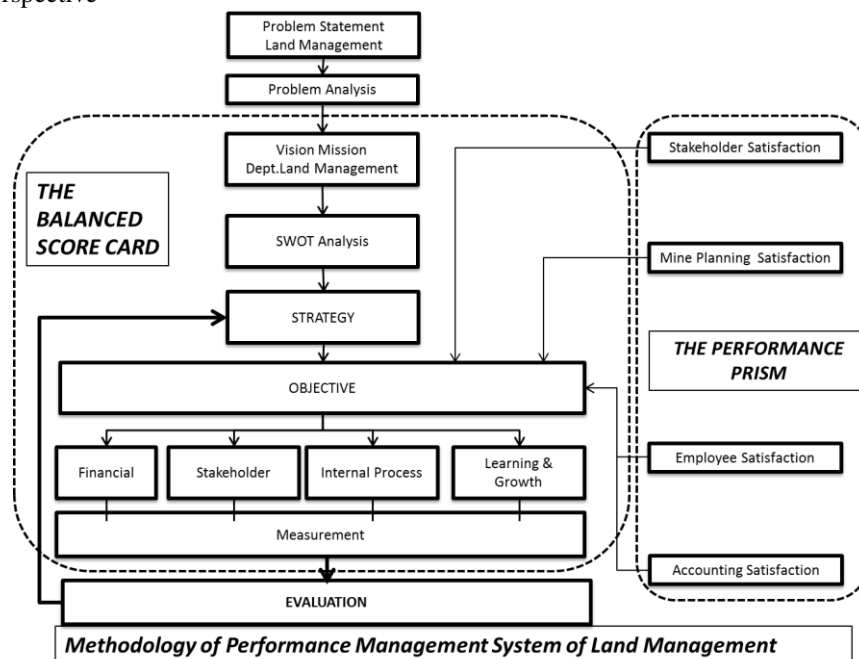


Figure 1. Frameworks Methodology

¹ Dermawan W., How To Create World Class Company
 ;Panduan bagi direktur dan Manager Page 24 - 26

² Dermawan W., Lecture MM6042 Corporate
 Performance Management, MBA ITB KPC Batch 2

III. RESULTS

A. ROOT CAUSE ANALYSIS

To determine the root cause of the problem that occurs can be used Fishbone Diagram Analysis. According to Prof. Dermawan Wibisono, in the book *How to Create a World Class Company*, Fishbone Diagram or Ishikawa Diagram is an analysis tool that provides a systematic perspective on the causes and effects that arise or have a contribution to an effect³. To determine causes and effects, the main categories 4 M can be used. (Method, Machine, Material, Manpower), 4 P (Place, Procedure, People, Policies), 4 S (Surrounding, Supplier, System Skill).

These categories can be combined to enrich ideas and help organize ideas (Wibisono).

From Part 2 of the Problem Statement, it is known that the main problem is the non-fulfillment of Land Requests by Mine Planning by Actual Land Compensated (actual land acquired) by Land Management which causes losses to KPC. From this condition, on March 29 to 30, 2021, a Focus Group Discussion was held which was attended by Superintendents, and Supervisors of the Land Management Department regarding the causes of this occurrence. Here is the resulting Fishbone Diagram.

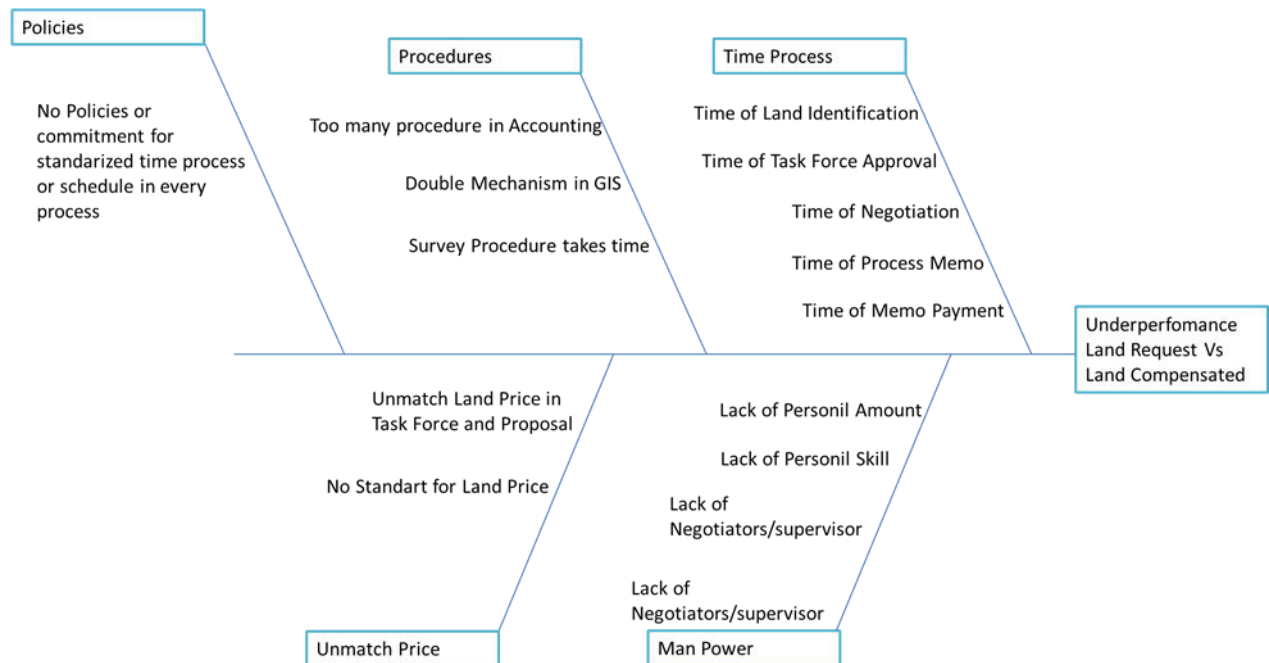


Figure 2. Bone Fish Diagram of Land Management Problem in PT. KPC

From this diagram it can be seen that there are 5 main causes of problems that occur in the LM Department in the Land Acquisition process :

1. Length of Processing Time (Time Process) :
 - a. Time of Land Identification
 - b. Time of Task Force Approval
 - c. Time of Negotiation
 - d. Time of Process Memo
 - e. Time of Memo Payment
2. Man Power (Personnel):
 - a. Lack of Personnel Amount
 - b. Lack of Personnel Skill
 - c. Lack of Negotiators/supervisor
3. Procedures (Procedures):
 - a. Too many procedures in Accounting
 - b. Double Mechanism in GIS (Gand Mechanism in GIS / Geographical Information System)
 - c. Survey Procedure takes time
4. Unmatch Price (Unmatched Land Price)
 - a. Unmatch Land Price in Task Force and Proposal (Land Price as result of Task Force decision does not match the Land Price Proposal as result of land identification)
 - b. No Standard for Land Price
5. Policies
 - a. No Policies or commitment for standardized time process or schedule in every process

³ Dermawan W., *How To Create World Class Company* : Panduan Bagi Direktur dan & Manager; Page 218

B. VISION AND MISSION OF THE LAND MANAGEMENT DEPARTMENT

From the Vision and Mission of KPC and ESD, it can be reduced to the Vision and Mission of the Land Management Department. According to Prof.Dr.Ir. Dermawan Wibisono, M.Eng in the book *How To Create World Class Company*, Vision is a series of sentences that state the ideals or dreams of an organization or company that will be achieved in the future. Organizations or companies need a vision that can be used as:

1. Unification of the company's direction and goals
2. As a basis for the use and allocation of resources and their control
3. Establish and build a corporate culture

To facilitate the preparation of the Vision, Brown (2000) has compiled a Vision generator in the form of a list of words that are generally used in preparing the organization's vision (Wibisono).

Vision of the Land Management Department:

"To Be World Class Land Management Provider to as Solution To Cost Effective World Best Mining Operation"

Mission :

"To Provide Land For Mining Operation With Best On Schedule Manner And Most Cost Effective Process By Empowered High-Performance Team To Deliver Consistent Profit And Growth To Company"

C. INTERNAL ANALYSIS

From the results of the FGD, several details of strengths, weaknesses, opportunities, and threats (SWOT Analysis) from the Internal Analysis were obtained:

1. Strength:

- The company's financial condition is strong for a Land Compensation (Land Acquisition) budget of around USD 16 million – USD 20 million (Rp. 200 billion to 280 billion) per year
- 22 Land Management personnel, 60% of whom are professionals with more than 10 years of experience
- Sufficiently complete equipment support

2. Weaknesses:

- Average 40% of the amount of Land Compensation (Land Acquisition) is not achieved for 5 years
- The average Land Price is still above the Land Price set by the Task Force by 26% for 5 years
- There is no clear price standard (NJOP does not apply)
- The number of Land Management Personnel is still lacking, there are still 20% vacant positions due to retirement or resignation that have not been filled.

- Based on the Job Desk Analysis, there are still 40% of personnel who do not have skills that match their Job Desk.
 - The land acquisition process is still 91 days long in one process. Whereas in 1 year it can reach 60-90 land acquisition processes
 - GIS procedures that have not been integrated between the Dept. LM and MP Dept. so that it takes a long time to provide Maps, an average of 4 days per map
 - Survey process takes a long time due to extensive conditions and equipment – an average of 7 days per process
 - Procedures in accounting that take an average of 30 days per process until disbursement to Land Owner (Memo Receive, Account Payable, Account Transfer)
 - The Task Force's pricing process takes an average of 30 days depending on the availability of the Level Chief at the location.
 - The average length of the negotiation process is 7 days.
3. Threats:
- Land overlapping which slows down the Land Compensation process (Land Acquisition) 30 days per process if there is land overlapping.
 - The area of KPC's operational area reaches 84,6000 Ha (1.5 times DKI Jakarta) so it is very difficult to prevent Land Claimers (overlapping land)
 - There is no written commitment from top management in this Land Compensation process.
4. Opportunity:
- Close relationship with Government and Police in the Land Compensation process

D. EXTERNAL ANALYSIS

From the results of the FGD, several details of strengths, weaknesses, opportunities, and threats from External Analysis were obtained:

1. Strength:

- Close relationship with Government and Police in the Land Compensation process

2. Weaknesses:

- Negative news arising from the Land Compensation (Land Acquisition) process can slow down the process by an average of 7 days (clarification process)

3. Threats:

- The entry of NGOs from outside slows down the process

4. Opportunity:

- Close relationship with Government and Police in the Land Compensation process

F. THE BALANCED SCORECARD ON LAND MANAGEMENT

From the results of the SWOT analysis conducted by FGD within the related Divisions at KPC, several strategies were obtained. The strategy fulfills:

- a. Strength – Opportunity Strategy :
 - Increased Achievement of Land Compensation (Land Acquisition) from the Target Request Mine Planning per year
 - Increasing Accounting Commitment in Process Payment and Transfer
- b. Strength – Threat Strategy :
 - Increased Executive Commitment to the Task Force
- c. Weakness – Opportunity Strategy :
 - Improved Process Land Compensation Efficiency (Land Acquisition)
 - Acceleration of Land Compensation Achievement (Land Acquisition)
 - Personnel Skill Upgrade
- d. Weakness Threat Strategy :
 - Increasing the Effectiveness of Land Personnel in achieving Land Compensation (Land Acquisition)

The formulation of these strategies are grouped into several perceptions. These strategies can also be broken down into more detailed targets as follows:

The formulation of the Perspective is as follows:

F.1 FINANCIAL/SHAREHOLDER

This perspective is financially or from the perspective of shareholders related to the company's profits and losses. In this discussion, Financial Perspective will refer to:

- Improved Land Compensation Achievement (Land Acquisition) from the Request Mine Planning target. This is related to the profit (profit) and loss (loss) caused by the non-fulfillment of Land Compensation (Land Acquisition) from the Target Request Mine Planning, resulting in new costs (loss) to overcome uncontrolled land (further road construction, stripping). Ratio is greater).
- Increased efficiency of Process Land Compensation (Land Acquisition) are costs that arise from all costs of the Land Compensation Process (Land Acquisition) starting from the price of land acquisition, the cost of the Land Compensation (Land Acquisition) process (Land Identification, Legalization, administration, etc.) and external costs in case of overlapping land and issues raised in the media.

F.2 CUSTOMER/STAKEHOLDER

This perspective is the customer/stakeholder from the Land Management Department, namely the Mine Planning Department who uses the land that has been acquired for the mining process. There are also customers/stakeholders that need to be considered,

namely Land Owners who will be measured using the Performance Prism. In the BSC the customer is Mine Planning who is very concerned about the Mining Sequence (Schedule), so the influential indicators are:

- Acceleration of Land Compensation Achievement (Land Acquisition) is the time required by the Land Management Department to complete the Land Compensation (Land Acquisition) Process from the initial Mine Planning request to Payment Transfer and Land Execution.

F.3 INTERNAL PROCESS

This perspective is a process that occurs within the Land Management Department so that the strategy is:

- Increasing the Effectiveness of Land Personnel in achieving Land Compensation (Land Acquisition) is the number of Land Management personnel who can complete the Land Compensation (Land Acquisition) process in a measure of time. In this calculation is the ability of 1 personnel to be able to complete the Land Compensation process (Land Acquisition) Ha per month.

F.4 LEARNING & GROWTH

This perspective is a process for growth, where what is very important in this process is the support from the Management Level Executive (CEO, COO, CFO) which is also included in the Task Force. In addition, increasing Personnel Skills, especially Negotiation, is very important for the Land Compensation process. Therefore, the strategy needed is:

- Increasing Accounting Commitment in Process Payment and Transfer
- Increased Executive Commitment to the Task Force
- Personnel Skill Upgrade

G. DETERMINATION OF INDICATORS

According to Prof. Dr. Dermawan Wibisono, M.Eng., in the Book of Corporate & Organizational Performance Management: Guidelines for Developing Indicators, it is stated that the determination of performance indicators is carried out by examining what variables must be measured in a company or organization by exploring data and resources owned by the company or organization.

By using this guide and FGD was held, which was attended by all Dept. Personnel. LM then obtained the determination of the target indicator and the explanation as follows:

TABLE 1. INDICATORS OF THE BALANCED SCORECARD

Perspective	Strategy in Perspective	Target	Code	Indicators
FINANCIAL	Increased Achievement of Target Request Land Compensation Mine Planning per year	Increasing Achievement of Target Request Land Compensation Mine Planning per year	F1	Achievement of the Land Compensation minimum of 100% of Target Request Mine Planning per year
	Peningkatan Efisiensi Proses Land Compensation	The decline in the average Over Land Price per year	F2	Achievement -rata Average Maximum Price Land Compensation Over 10% of the target set Price Task Force
		Decrease cost budget Over Land Compensation Process	F3	Achievement of the average cost of Land Identification Maximum Over 2% of the Budget Plan Land Identification (2% is the figure
			F4	Legalization and Administration Process Costs Land Compensation 100% in accordance with the Budget
		External Cost Reduction Process of Land Compensation Fee	F5	Lowering the cost of Land Dispute (overlapping) 30% of the budget set
			F6	Lowering the cost of media (media clarification) 30% of the budget set
CUSTOMER /STAKEHOLDER	Accelerate Achievement of Land Compensation	Acceleration Process Land Identification	C1	Average acceleration Land Identification Process to 3 days from 14 days
		Approval Process Acceleration Task Force	C2	Average acceleration Approval Process Task Force to 7 days from 30 days
		Negotiation Process Acceleration of Land	C3	Average acceleration of Land Negotiation Process to 3 days out of 7 days
		Acceleration Process Memo Payment	C4	Average acceleration Memo Payment Process Being 7 days from 14 days
		Acceleration Process Transfer Payment	C5	Average Acceleration Process Transfer Payment to 7 days from 30 working days
INTERNAL PROCESS	Increased effectiveness in achieving the land Personnel Land Compensation	The number of personnel in accordance with the	P1	Imposition 1 Personnel at 6 ha / Month
		Total Personnel Accounting Dedicated to the Land Compensation Memo	P2	Imposition of Accounting Personnel Dedicated to the Memo Exemption 6 Ha / Month / personnel
		The amount of time dedicated to the Memo Land Executive Compensation	P3	Imposition of Executive Time on Task Force 6 Ha / Month / Task Force Meeting
LEARNING & GROWTH	Increased Commitment Accounting in the Process Payment and Transfer	Accounting their commitment in the process of Payment and Transfer rising faster 1 Payment Memo document 7 days and 7 days Transfer	L1	Commitments such as SOP or Memo commitment in allocating Personnel Accounting and faster processing time
	Increased Commitment to the Task Force Executive	Their commitment to the Executive in the process increasing faster Task Force 1 document 7 days	L2	Commitments such as SOP or Memo commitment in allocating time and meetings
	Personnel Skill Improvement	Negotiation skills training and other liberation Skill	L3	Number of training hours per personnel LM 40 Hours

H. RELATIONSHIP BETWEEN VARIABLES

The relationship between performance variables is very important in performance management (Wibisono, 2016). Several methods that can be used to explore the relationship between these performance variables include factor analysis, correlation analysis, the use of fishbone diagrams.

This Performance Management Development will use Correlation Factor Analysis and partly use Microsoft Excel with Regression Analysis Method. This is useful for building correlation calculations between one variable and another variable or the variables above it. The data used is Time Series data for 5 years, so it is hoped that the relationship between variables will be stronger.

TABLE 2. CORRELATION/RELATIONSHIP BETWEEN VARIABLES

Perspective	Strategy in Perspective	Indicators	Correlation
FINANCIAL	Increased Achievement of Target Request Land Compensation Mine Planning per year	Achievement of the Land Compensation minimum of 100% of Target Request Mine Planning per year	- Request Average land Compensation for 5 years is 1514 hectares and the average Actual Land Compensation is 988 hectares, there is still a shortage of (under) 525.2 hectares or about 34%. - Therefore, to achieve 100% then it takes 525.2 Ha in the target can be met
		Achievement -rata Average Maximum Price Land Compensation Over 10% of the target set Price Task Force	- Average - Average Price Land Comp. Task Force = USD 10,009 / ha and average Actual Price Land Comp. = USD 12,676 / ha. These conditions indicate the Over Price of \$ 2,667.39 or over 26% - Therefore, in accordance with the order for the Maximum Target is Over USD 1,000 or 10%, so a decrease in the average Over Land Price happen
	Peningkatan Efisiensi Proses Land Compensation	Achievement of the average cost of Land Identification Maximum Over 2% of the Budget Plan Land Identification (2% is the figure approved by the Task Force)	- Average -rata Identification Plan Land cost is = USD 600,000 and USD 800,000 Actually, or over USD 200,000 or Over 33% - Therefore, the maximum not it is over 2%, or over USD 12,000 so the decline occurred Over Budget
		Legalization and Administration Process Costs Land Compensation 100% in accordance with the Budget Plan	Average Plan Legalization and administrative costs are = USD 1,535,802 and USD 1,316,405 Actually
		Lowering the cost of Land Dispute (overlapping) 30% of the budget set	Plan for Land Dispute fee is USD 500,000 then when lowered by 30% to USD 350,000
		Lowering the cost of media (media clarification) 30% of the budget set	Plan for Land Dispute fee is USD 100,000 then when lowered by 30% to USD 70,000
CUSTOMER /STAKEHOLDER	Accelerate Achievement of Land Compensation	Average acceleration Land Identification Process to 3 days from 14 days	Average of Land Identification process is 14 days, so it was lowered to 3 days
		Average acceleration Approval Process Task Force to 7 days from 30 days	Average price Approval Process Task Force 30 days
		Average acceleration of Land Negotiation Process to 3 days out of 7 days	An average of 7 days of Land Negotiation Process
		Average acceleration Memo Payment Process Being 7 days from 14 days	On average Process Memo Payment 14 days
		Average Acceleration Process Transfer Payment to 7 days from 30 working days	On average Process Transfer Payment 30 working days
INTERNAL PROCESS	Increased effectiveness in achieving the land Personnel Land Compensation	Imposition 1 Personnel at 6 ha / Month	Each year the land acquired was approximately 1514 hectares to 126 hectares per month minimum. So with 22 personnel currently takes about 5.7 hectares or 6 ha / month per personnel in order to achieve the target of an average Land Compensation
		Imposition of Accounting Personnel Dedicated to the Memo Exemption 6 Ha / Month / personnel	With 6 Ha / month per personnel then Memo payment to be processed per Personnel Accounting is 6 Ha / Personnel
		Imposition of Executive Time on Task Force 6 Ha / Month / Task Force Meeting	The average land acquired is 1514 hectares and Task Force every month should be at least perform the determination of Land Price of 126 Ha
LEARNING & GROWTH	Increased Commitment Accounting in the Process Payment and Transfer	Commitments such as SOP or Memo commitment in allocating Personnel Accounting and faster processing time	SOP and Executive Level Management Commitment is necessary for the allocation of personnel resources and time to process the Land Compensation has become very important and controllable
	Increased Commitment to the Task Force Executive	Commitments such as SOP or Memo commitment in allocating time and meetings	
	Personnel Skill Improvement	Number of training hours per personnel LM 40 Hours	

From regression between strategy in perspective result in The correlation formula.

PERSPECTIVE	CORRELATION INDICATORS				
FINANCIAL	Increased Achievement of Land Compensation from the Target Request Mine Planning per year				
Correlation (Regression)	$y = 4104 - 31.069X$	$y = 2561 - 0.0793X$	$y = 2970 - 0.0016X$		
STAKEHOLDER	Land Compensation Achievement Acceleration X= Amount of Total Time Require	Decrease over average Land Price per year	Reducing External Costs from Process Land Compensation Fees		
Correlation	$X = X1+X2+X3+X4$				
STAKEHOLDER (1)	Time Land Identification Process Acceleration (X1)	Time of Process Approval Task Force (X2)	Time of Land Negotiation Process (X3)	Time of Memo Payment Process (X4)	Time of Payment Transfer Process (X5)
Correlation (Regression)	$X = 178.57 - 3.771X(IP)$				
INTERNAL PROCESS	Increasing the Effectiveness of Land Personnel in achieving Land Compensation X(IP) = Total Amount of Personnel				
Correlation	$X(IP) = Xip1+Xip2+Xip3$				
INTERNAL PROCESS (1)	The number of personnel Land Management(Xip1)	Number of Dedicated Accounting Personnel on Land Compensation Document (Xip2)	Total Executive Dedicated on Land Compensation Memo (Xip3)		
Correlation (Regression)	$X(IP) = 179.45 - 0.7969X(LG)$				
LEARNING & GROWTH	Total Hours of Training Land Management Personnel in a year				

Figure 3 : The Formula of Correlation between Indicators in Perspective

From the overall correlation analysis and strategy analysis, we get a hierarchical and mathematical relationship. Therefore, these results will be included and

compiled in the form of mapping from each perspective and target that has been analyzed.

I. THE BALANCED SCORECARD STRATEGY MAP

From the correlation analysis combined with Strategy Analysis, a Strategy Map can be drawn up

then be confirmed with Prism Management Performance Indicators for Stakeholder Satisfaction and Stakeholder Contribution. This is done to complete the analysis of The Balanced Scorecard which focuses on efforts to achieve

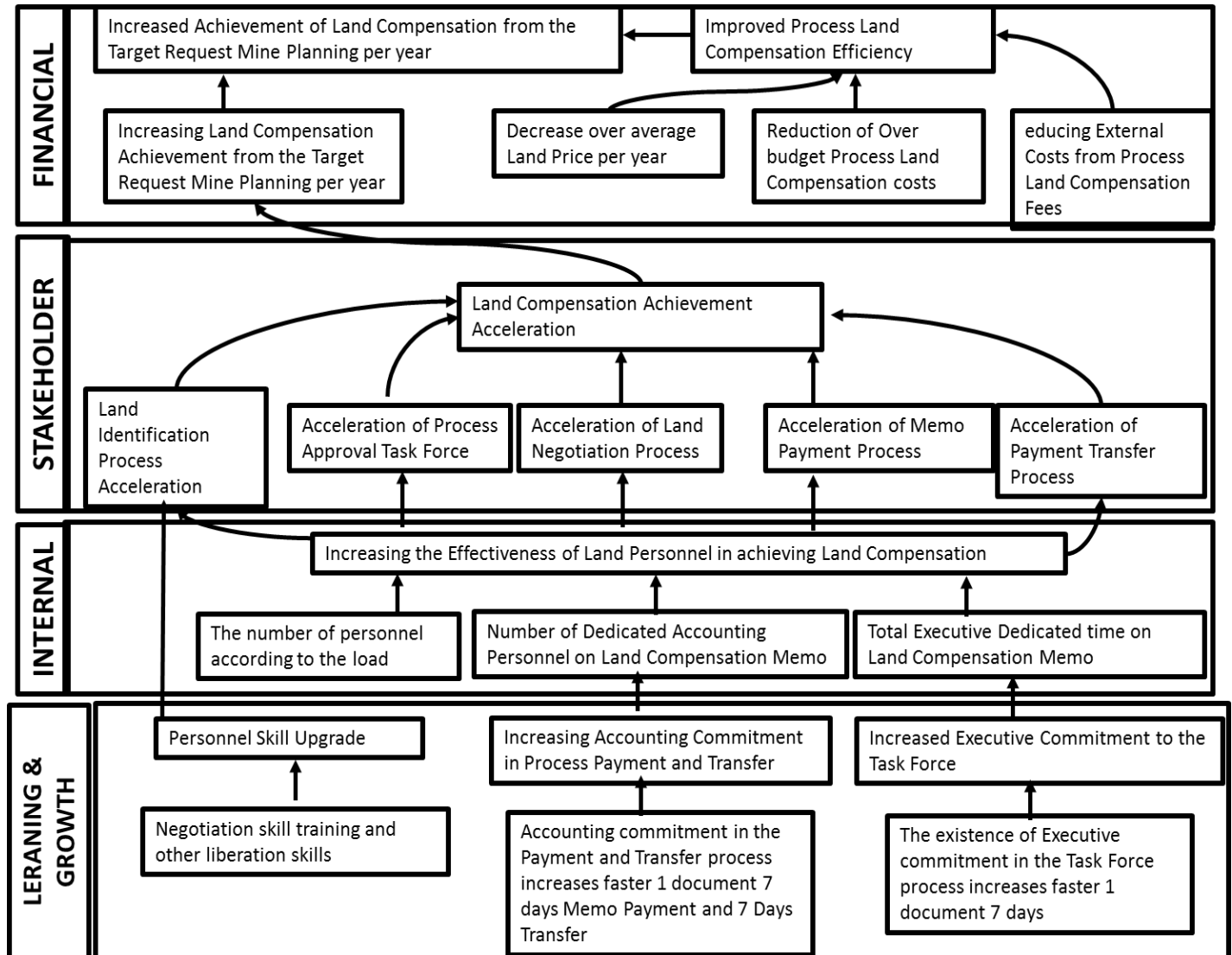


Figure 4. The Balanced Scorecard for Land Management in KPC

J. CONFIRMATION OF STAKEHOLDER PERSPECTIVE OF PERFORMANCE PRISM

In developing the Performance Management System for Land Management for the operational interest of the KPC Mine, the Performance Management Framework The Balanced Scorecard is used which will

land acquisition and cost efficiency of land acquisition. Prism Management Performance Indicators will see how the Satisfaction Indicators from Stakeholders can be met as well as Stakeholder Contributions can also affect Land Acquisition Achievement Performance.

According to Prof. Dr. Dermawan Wibisono, M.Eng., in the book *How To Create a World Class Company*, performance Prism is a Performance Management System developed by Neely and colleagues from the University of Cambridge (who has now moved to the University of Cranfield) England, when they saw that the BSC only includes two stakeholders, namely shareholders and customers. The Performance Prism concept can provide satisfaction to all stakeholders, such as the community, activists, customers, employees, government (legislators and regulators), and related suppliers.

In this paper, several Stakeholder Satisfaction Indicators will be taken from the Prism Performance Catalog.

The catalog is structured around the Performance Prism. Prism takes a stakeholder-centered view of performance measurement. It reflects the need to measure not only Stakeholder Satisfaction but also Stakeholder Contribution to the wants and needs of the organization. The catalog contains measures of each of the following performance dimensions that are distinct, but logically related:

- Stakeholder Satisfaction - who are our stakeholders and what do they want and need?
- What strategies should we adopt to satisfy the wants and needs of these key stakeholders?
- What critical processes do we need if we are to implement this strategy?
- Capabilities - what capabilities do we need to operate and improve this process?
- Stakeholder Contributions - what contributions do we need from stakeholders if we are to maintain and develop this capability

In this study, a special indicator of interest satisfaction will be used. This is used to confirm whether the Land Compensation process has met all aspects of stakeholder satisfaction.

Each of the Performance Prism facets is divided into sub-facets that provide further categorization of performance measures:

Stakeholder Satisfaction :

- Customer Satisfaction
- Employee Satisfaction
- Investor Satisfaction
- Regulators and
- Community Satisfaction
- Supplier Satisfaction

Of these 6 indicators used are Customer, Employee, Investor and Community Satisfaction.

This is done because these 4 Indicators will affect the Performance of all Perspectives in the BSC that has been built.

TABLE 3. PRISM INDICATORS FOR LAND MANAGEMENT

No	Indicator	Measurement	Target	Justification
1	Stakeholder Satisfaction			
A	Customer Satisfaction (Mine Planning)	Customer Satisfaction Survey regarding appropriate use Land Compensation Process with Mine Sequence	100% Compensation process completed as Sequence	This indicator is important for Land Compensation mengkonfirmasi process can be completed in accordance Sequence
B	Customer Complaint	This size using primer Survey (kuesnioner) on every completed the process of land Compensation to improve	Complaint resolved	This indicator is important for Land Compensation mengkonfirmasi process can be improved performance in
2	Employee Satisfaction			
A	Employee Satisfaction (Land management)	This size using primer Survey (kuesnioner) on every completed the process of land Compensation to improve	100% satisfy	This indicator is important for performance mengkonfirmasi Personnel (Employee) increased with increasing
B	Employee Complaint	This size using primer Survey (kuesnioner) on every completed the process of land Compensation to improve	Complaint resolved	This indicator is important for Land Compensation mengkonfirmasi process can be improved performance in
3	Investor Satisfaction			
	Decrease Cost Land Compensation	Performance Land Management shows decline in total costs by the number Land Land Compensation fulfilled	Decrease Cost	This indicator is important for the process mengkonfirmasi Land Compensation Cost can lower costs that are
4	Community Satisfaction			
	Community Satisfaction (Land Owner)	This size using primer Survey (kuesnioner) on every completed the process of land Compensation to improve	100% satisfy	This indicator is important for Land Compensation mengkonfirmasi process does not cause harm to the public that will
	Community Complaint	This size using primer Survey (kuesnioner) on every completed the process of land Compensation to improve	Complaint resolved	This indicator is important for Land Compensation mengkonfirmasi process does not cause harm to the public that will

K. REPORTING THE BALANCED SCORECARD LAND MANAGEMENT PT. KPC

The simplest way to communicate Performance is to use Display charts. The main rule in making display graphics is the use of large text to make it easy to read, bold text to attract attention and the use of many colors to attract attention. In addition, there are good image characteristics for the purposes of this display, including being easy to design, easy to update, easy to access and easy to interpret (Wisibino; 2016).

The Balanced Scorecard report consists of :

- The Land Management Manager report displays:**
 - Achievement of Total Actual Land Compensation (Land Acquisition) Area Vs. Request Land Compensation (Land Acquisition) Area
 - Average Total Actual Land Price per year vs Budget Average Land Price (all areas)
 - Average Total Actual Cost of Process Land Compensation (Land Acquisition) vs Budget (all areas)

- Total External Cost of Process Land Compensation Cost (Land Acquisition) vs Budget (All Areas)
- Average Land Compensation Achievement time (all areas)
- Average Land Personnel Ratio per area of Land Compensation (Land Acquisition) (all areas)
- Accounting commitment in the Payment and Transfer process increases faster 1 document 7 days Memo Payment and 7 Days Transfer
- Executive commitment in the Task Force process increases faster by 1 document 7 days

Prism Performance Confirmation:

- Customer Satisfaction (Mine Planning)
- Customer Complaint
- Employee Satisfaction (Land management)
- Employee Complaint
- Reducing Cost of Land Compensation (Land Acquisition)
- Community Satisfaction (land Owner)
- Community Complaint

2. Superintendent Report

- Achievement of Total Actual Land Compensation (Land Acquisition) Area Vs Area 1 Request Land Compensation (Land Acquisition)
- Average Total Actual Land Price per year vs Budget Average Land Price Area 1
- Average Total Actual Cost of Process Land Compensation (Land Acquisition) vs. Budget (Area 1)
- Total External Cost of Process Land Compensation (Land Acquisition) Cost vs. Budget (Area 1)
- Average Land Compensation Achievement time (area 1)
- Average Land Personnel Ratio per area of Land Compensation (Land Acquisition) (area 1)
- Minimum Land Personnel Training Ratio in area 1

3. Supervisor's Report

- Target Actual Land Compensation (Land Acquisition) per Area
- Average Actual Land Price Vs Budget per area
- Average Actual Land Identification cost vs Planned Budget Land Identification per Area
- Average Legalization and Administration Cost of Process Land Compensation (Land Acquisition) per area
- Overlapping and land dispute fees per area
- Average Process Land Identification time per area
- Average Process Approval Task Force time per area
- Average Land Negotiation Process time per area
- Average Process Memo Payment time per area
- Average Process Transfer Payment per area
- The number of personnel according to the loading per area
- Number of Dedicated Accounting Personnel on Land Compensation Memo (Land Acquisition)
- Total Executive Dedicated time on Memo Land Compensation (Land Acquisition)

- Number of Negotiation Skills Training and Liberation Skills on Personnel per area

4. Officer's Report

- Target Actual Land Compensation (Land Acquisition) per Personnel Person
- Average Actual Land Price Vs Budget per area
- Average Actual Land Identification fee vs. Budget Land Identification Plan per Land Compensation Case (Land Acquisition)
- Average Legalization and Administration Cost of Process Land Compensation (Land Acquisition) per case of Land Comp.
- Overlapping and land dispute fees per Dispute Case
- Average Process Land Identification time
- Average Land Negotiation Process time per case
- Number of Man Houer Training

IV. DISCUSSION

In 2019 Benchmarking was carried out to PT. Citra Palu Minerals to see the methods, processes and costs incurred on Land Management in the area. CPM has 85,180 hectares of mining concessions in Central Sulawesi and South Sulawesi. The following are the results of Benchmarking related to CPM operations that are adjusted to BSC Land Management at KPC. From the benchmarking, we got the information of Land Compensation Process in PT. KPC :

- Average Land Compensation in a year 50 Ha/month
- Average Price Land Compensation IDR 1,000,000,000 /Ha according to NJOP or the current price in the Palu area
- Average Process fee reaches IDR 600,000,000 per Process
- Legalization fee USD 3,000,000,000
- Overlapping and land dispute costs reach USD 560,000 per year
- Land Identification Process Time 21 Days
- 7 days Process Approval Task Force average acceleration
- Average Acceleration of Land Negotiation Process 3 days
- Average acceleration of Process Memo Payment 7 days
- The average speed of Process Transfer Payment is 7 days
- 1 Personnel Loading up to 12 Ha/Month

V. SIMULATION OF FORMULATION BSC

In order to solve the problem in Land Compensation in KPC, therefore require Simulation of BSC

Formulation. The Problem of under performance of Land Compensation of 40% can be solve by Applied this BSC to Land Management Department Work Flow.

If the target of Land Compensation in 2021 was 1.500 Ha, therefore to achieve its Compensation by applying The Balanced Scorecard :

PERSPECTIVE		CORRELATION INDICATORS				
FINANCIAL	Increased Achievement of Land Compensation from the Target Request Mine Planning per year (Ha)					
	1500					
	Correlation (Regression)	$y = 4104 - 31.069X$	$y = 2561 - 0.0793X$	$y = 2970 - 0.0016X$		
		83.81	13,379.57	918,750.00		
STAKEHOLDER	Land Compensation Achievement Acceleration X = Amount of Total Time Require (Days per Process)	Decrease over average Land Price per year \$/Ha	Reducing External Costs from Process Land Compensation Fees			
Correlation		$X = X1+X2+X3+X4$				
		10	28	5	12	29
STAKEHOLDER (1)	Time Land Identification Process Acceleration (X1) in Days	Time of Process Approval Task Force (X2) in Days	Time of Land Negotiation Process (X3) in Days	Time of Memo Payment Process (X4) In Days	Time of Payment Transfer Process (X5) In Days	
Correlation (Regression)	$X = 178.57 - 3.771X(IP)$					
		25.07822859				
INTERNAL PROCESS	Increasing the Effectiveness of Land Personnel in achieving Land Compensation X(IP) = Total Amount of Personnel					
Correlation		$X(IP) = Xip1+Xip2+Xip3$				
		22	2	1		
INTERNAL PROCESS (1)	The number of personnel Land Management (Xip1) (P)	Number of Dedicated Accounting Personnel on Land Compensation Document (Xip2)	Total Executive Dedicated on Land Compensation Memo (Xip3)			
Correlation (Regression)	$X(IP) = 179.45 - 0.7969X(LG)$					
		197,5781152				
LEARNING & GROWTH	Total Hours of Training Land Management Personnel in a year (Hours)					

Figure 5. The Balanced Scorecard Simulation

By applying The Balanced Scorecard we can achieve the Result of Indicators that require to achieve the Amount of Land Compensated of 1.500 Ha in 2021. The Indicators are :

- Amount of Total Time Require for Land Comp = 84 Days
- Time Land Identification Process Acceleration (X1) in Days = 10 Days
- Time of Process Approval Task Force (X2) in Days = 28 Days
- Time of Land Negotiation Process (X3) in Days = 5 Days
- Time of Memo Payment Process (X4) In Days = 12 Days
- Time of Payment Transfer Process (X5) In Days = 29 Days
- Total Amount of Personel Involve = 25 Personel
- The number of personnel Land Management(Xip1) = 22 Personel
- Number of Dedicated Accounting Personnel on Land Compensation Document (Xip2) = 2 Personel
- Total Executive Dedicated on Land Compensation Memo(Xip3) = 1 Personel
- Total Hours of Training Land Management Personel in a year (Hours) = 197 Hours
- Average Land Price per year \$/Ha = \$ 13,379.57 /Ha
- Reducing External Costs from Process Land Compensation Fees = \$ 918,750.00/Ha

By Applying all this indicators in perspective, the total Land Compensated will be achieved of 1.500 Ha in 2021.

With Combining application of Prism Performance Indicators and comply all the indicators, The process of Land Compensation will be smooth and all stakeholder will be satisfy by the result of Land Compensation.

V. CONCLUSION

1. To anticipate global needs of coal, KPC had to increase its production and required Land Management.
2. The actual number of Land Compensated has never inline with the number plan requested by the Mine Planning Division. There was a difference of about 40% on average the amount of Land Compensated.
3. If Land Management Department fails to provide land planned by Mine Planning, it will cause additional costs due to longer Road, excavation, and fuel costs. This condition reduces the profit earned by KPC's mining operations.
4. To determine the root of the problem, writer will use Fishbone Diagram Analysis and to solve them, use The Balanced Scorecard (BSC) Performance Management System. BSC can address many barriers to effective strategy.
5. Writer also require Prism Performance Management Indicators. The Prism will confirmed the BSC to ensure the satisfaction of stakeholder. The ultimate goal of this application is to solve the land compensation problem and ensuring satisfaction of stakeholder inline with Good Mining Practice.
6. In developing a Performance Management System for Land Management for KPC's mining operational, the Balanced Scorecard Performance Management Framework will be used and then be confirmed with Prism Management Performance Indicators for Stakeholder Satisfaction. This Prism frameworks is to complete the analysis of The Balanced Scorecard which focuses on efforts to achieve land acquisition and cost efficiency of land acquisition.
7. Vision of the Land Management Department:
"To Be World Class Land Management Provider to as Solution To Cost Effective World Best Mining Operation"
8. Mission :
"To Provide Land For Mining Operation With Best On Schedule Manner And Most Cost Effective Process By Empowered High-Performance Team To Deliver Consistent Profit And Growth To Company"
9. The External Analysis and Internal Analysis was conducted by applying SWOT Analysis with Focus Group Discussion and resulted to Several Strategy of Land Management.
10. The Strategy will be analyzed the relationship and correlation using data. The Data then correlated by using Regression Method in Excell. The result of regression was Formula of correlation between indicators in each perspective.
11. By Using the Correlation and formulation the Balanced Scorecard Strategy Map was developed.
12. To complete the analysis of The Balanced Scorecard which focuses on efforts to achieve land acquisition and cost efficiency of land acquisition. Prism Management Performance Indicators will see how the Satisfaction Indicators from Stakeholders can be met as well as Stakeholder Contributions can also affect Land Acquisition Achievement Performance.
13. By Applying all this indicators in perspective, the total Land Compensated will be achieved of 1.500 Ha in 2021.
14. With Combining application of Prism Performance Indicators and comply all the indicators, The process of Land Compensation will be smooth and all stakeholder will be satisfy by the result of Land Compensation.

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