OPTIMIZING ORGANIZATION DESIGN USING THREE LEVEL ANALYSIS OF ORGANIZATION AT ENGINEERING DIVISION OF PT BINA REKA CIPTA UTAMA

Rio Lukman Tawekal and John Welly
School of Business Management
Institut Teknologi Bandung, Indonesia
Rio.lukman@sbm.itb.ac.id

Abstract. PT. Bina Rekacipta Utama is an engineering consultant company at oil and gas industry. The owner of the company stated that the employee turnover rate was high and the owners wants fix the problem. The aim of this research was to analyzed motivation level of the employees because individual motivation has significance relation with turnover rate and employee performance. Since PT. Bina Rekacipta Utama is a service company, the engineers are the core of the company. If the employee performance of the engineers can be increase, the company performance also will increase. This research conducted using descriptive analysis and quantitative analysis for the correlation each variable to employee performance. To improve the management system, the researcher wants to analyze the engineering division because this division is the core of the company. The researcher tries to analyze 3 level of organization; Organization level, Team Level, Individual level. And create an organization model for PT. Bina Rekacipta Utama by using the data that have been gathered from the company as an evaluation material to fix its organization model. The researcher used 7S McKinsey organization model because it is the most simple and popular organization model to apply it at PT. Bina Rekacipta Utama Hopefully after the research is conducted the result can be used for PT. Bina Rekacipta Utama evaluation material.

Keyword – Redesign Organization

Introduction

Background
Humans are assets for an organization, they are the core of the organization that create value and developed the organization itself. Motivation was one of the important things for humans because it was created from the urge of needing something and need to fulfill or accomplish it. Therefore, an organization needs to maintain its employee motivation to keep the organization productivity. we can aim HR strategies to develop human capital by improving skills and motivated employee by giving opportunities to participate, or you can aim at minimizing the cost of your human capital by controlling behavior, lowering the skill level of jobs and limiting opportunities to participate in decision-making in the firm Motivation also affected by the organization the organization system, performance management. To control people behavior and keep their motivation a company can create an integrated organization model that have a system that supports its employee motivation. (Patrick M. Wright, 2008) .

PT. Bina Rekacipta Utama is a private multidisciplinary engineering company that cover many fields such as FEED and Feasibility study, Pipeline Integrity Management System, Expertise Provider, Brown and field blanket engineering service, Risk Assessment Analysis, Structural Integrity Management System. P.T. Bina Rekacipta Utama is categorized as a Small Medium Enterprise

company. This company established in the year 2000 and has been running for 15 years and still growing.

PT. Bina Rekacipta Utama is in a growing state but its management system need to be improved in order to keep up its growing phase based on greiner growth model it has been on phase 2 and need to move to phase 3 but the company did not have the functional structure to complete the phase 2. From the owner statement that PT. Bina Rekacipta Utama has great turnover rate and employees feel demotivated it will reduce their productivity and the owner wants to boost their employee motivation. From problem that has been mentioned before the company needs to fix their structure and system that support its motivation and control employees behavior to do so, The company needs to redesign its organization because creating integrated system needs to synergize with other organization elements.

Problem Statement
The owners of PT. Bina Rekacipta Utama state that they want to improve their employees motivation to increase employee performance and decrease employees turn over. To increase employee motivation researcher wants to redesign organization and evaluate engineering division performance using three level analysis of organization because redesign organization also affect employee motivation by changing the system of the company it will control how they do and how they feel.

Research Objective
To design PT. Bina Rekacipta Utama Organization model to improve employee motivation and increasing employee performance.

Research Questions
Based on the problem statement that the owner wants to increase the employee motivation these are questions that the researcher need to answer:
How is the current employee motivation on PT. Bina Rekacipta Utama?
Is the company current system support the employee motivation?
What variables that needs to be concerned by the company?

Scope of Research
In this research, the researcher only chooses engineer division that has 40 employees in this division (N=40). The researcher only uses engineer division because engineers are different with supporting units such as Finance, General Affair, Marketing, Human Resource works. Engineers need teamwork to complete a project and engineers are company core product.

Literature Review

This chapter will explain more about organization design, motivation, turnover relation. The first one is about Human Resource Strategy that explains in figure 2.1 that turnover are one of what employee do and what employee do is affected by what employee have (skill, abilities, competency) and what employee feel (commitment, engagement, motivation). These 2 factors are affected by human resource strategy (training, development, performance management, reward, communication, recruitment). Performance management and reward system are part of 7S McKinsey organization model system which means if the researcher wants to change the current system, the researcher also needs to change or create other elements in order to synergize all elements. Organization as an open system is used as a philosophy that explains why an organization can be seen as an organism of a system that keeps changing because external factors (environment). Three level organization behavior analysis explain that there are organization level, team level, individual level in an organization.
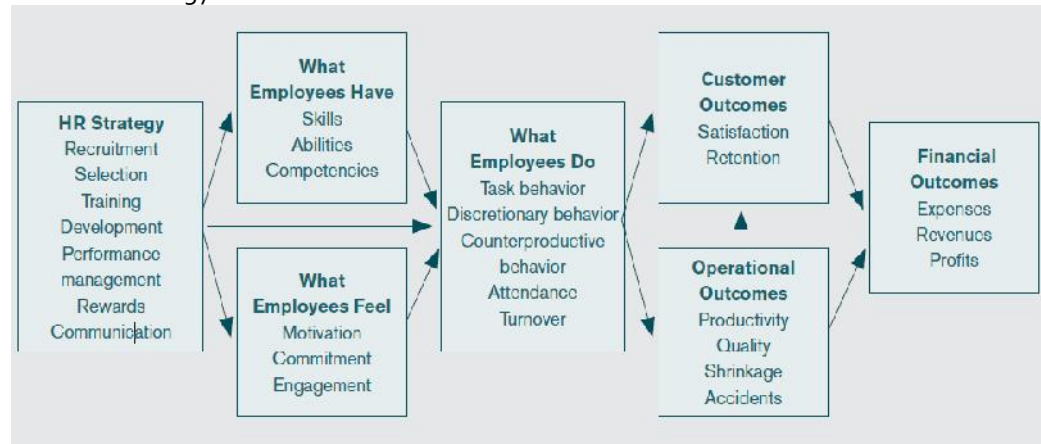
Human Resource Strategy

Figure 2.1 SHRM Model (Patrick M. Wright, 2008)

As seen in figure 2.1 HR Strategy is affecting what employee have (Skills, Abilities, Competencies) because of recruitment, selection, training, and development; what employees feel (motivation, commitment, engagement) affected by performance management, reward, and communication. As mentioned before performance management, rewards, communication in HR strategy also affect motivation level. From here the researcher can create a performance management, reward system by creating an organizational model that achieve the desired behavior, increase motivation, and lower turnover.

McKinsey 7s Framework
McKinsey 7s framework purpose and goal is to help managers to execute their strategy and help to analyze how well the organization position to achieve its intended objective such as is:
Analyze and improve the performance of a company.
Examine the likely effects of future changes in a company.
Help company to organize its department in merger and acquisition
Source of information to create strategy by using company current organization position
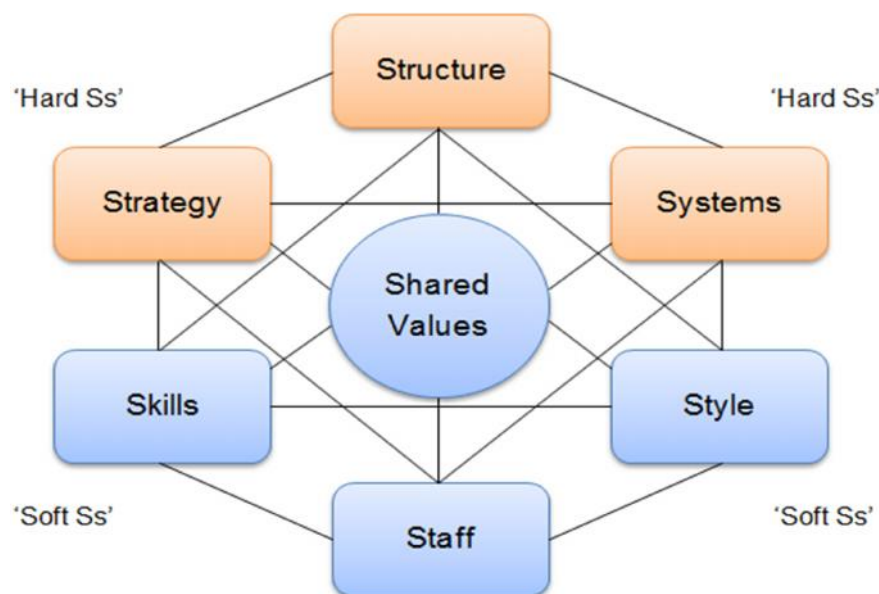McKinsey Model diagram is shaped as a spider web with 7 dependent elements on it

Figure 2.2 7s McKinsey Model (Jurevicius, 2013)

As shown in Figure 2.2 McKinsey 7s model consist seven interdependent elements that divided into 2 categories as "Hard" and "Soft" Elements.

Greiner's Model of Growth
As time goes by, an organization will need to know how far they have come and their growth. Greiner's Model of growth is one of the best-known life cycle models of organizational growth. This model that Larry E. Greiner propose that an organization passes through five sequential growth stages during the course of its evolution and every stage have its own specific problem which must be solved by the organization itself.
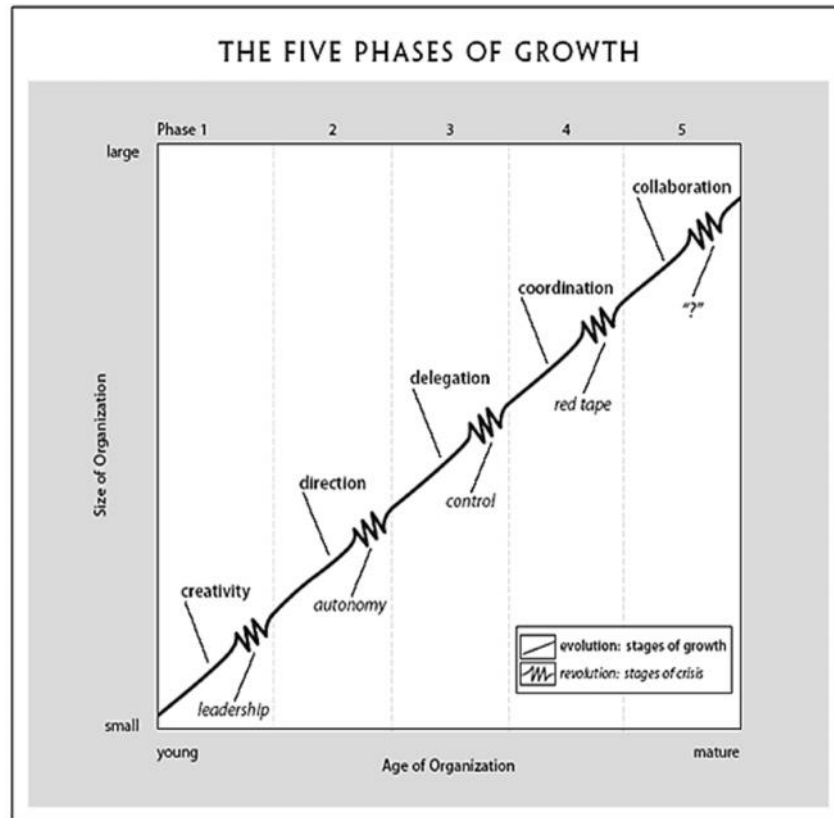

Figure 3.2 7s McKinsey Model (Jurevicius, 2013)

From Figure 2.3 there are five stage of growth (evolution) and five stage of Crisis (revolution). Organization needs to overcome every stage of crisis in order not to fall in failure and chaos so every company needs to have skill in organizational design and use it to proceed to the next stage.

Organization As an Open System
A system is a group of components (or parts) that interact with each other and are dependent on each other to serve a common goal. Open system theory was originally proposed by (Bertalanffy, 1969), Open System is regularly exchange feedback with its external environment` so it is including inputs, process, output, goals, evaluation, learning, and assessment are important element for an open system organization.
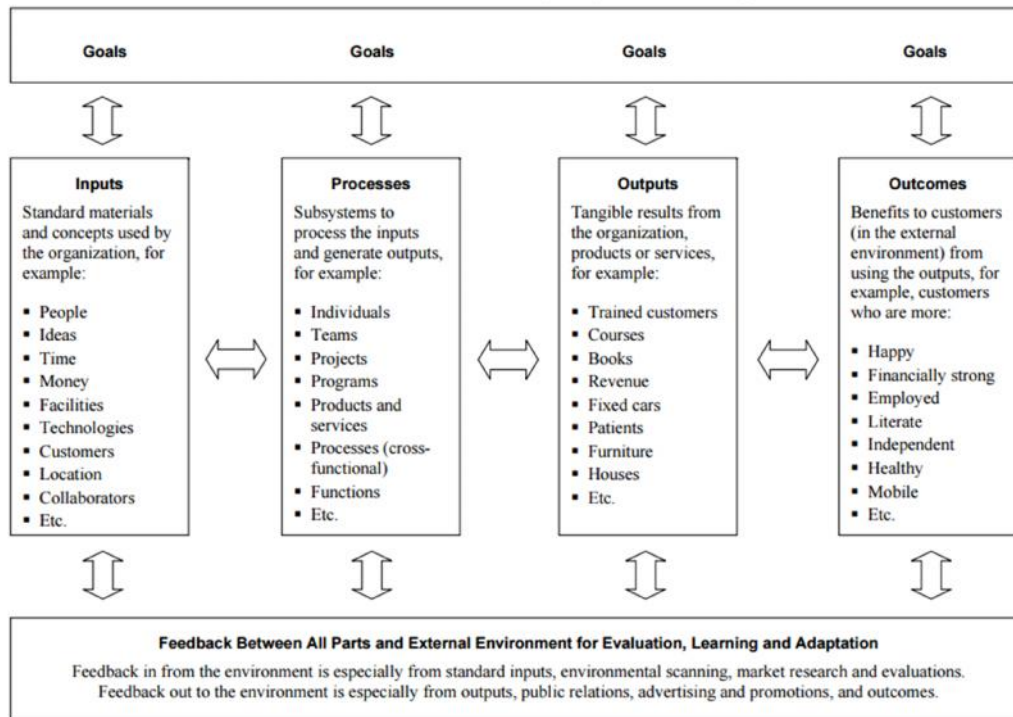
Figure 2.4 Organization As An Open system (Authenticity Consulting, LLC)

Three Level of Organizational Behavior
Organizational behavior is a study of how an individual behave such as how they behave in a group. The purpose of organizational behavior is to know better factors that affect individual and group dynamics in an organizational environment so that individuals can make their group and organization more effective and efficient. There are three basic level analysis of organizational behavior which is:

Drive Theory
4 Drive Theory is a model that Lawrance and Nohria summarize four basic drives that can be used to identify almost all human behavior. Even though every individual human are unique but we also arguably have common drive. These common drives were created by evolutionary process
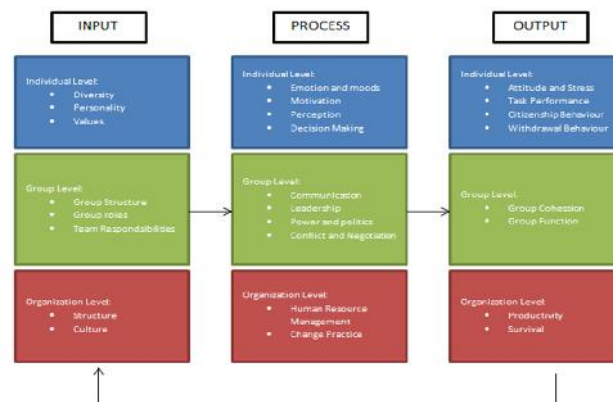

Figure 2.5 three level of organization analysis

Acquire and Achieve

Drive that trigger people to have both material goods and social status. It leads people to a better performance and their determination to compete.

Bond and Belong

Drive that trigger human emotion such as friendship, teamwork, and caring for each other; this drive creates social relationship forms and caring commitments to others.

Create and Challange

The drive that affected by employees' environments can trigger curiosity, exploration, and developing understanding. It also relates to one's comprehension about the organization influence and the significance of organization influence itself.

Defend and Define

The defend drive only triggered if there are a threats. Threats to individual, their group, and the firms as a whole, can stimulate the drive to defend.

The role of team effectiveness in construction project teams and project performance (Azmy, 2012)

In this research there was a pilot study conducted to obtain insight about how an effective project team can be created and the main factors that drive team effectiveness from different perspectives. There were 9 team performance section that tested: team goals and objectives, team leadership, company/top management support, audit and monitoring, roles and responsibility, creativity and innovation, team/task processes, team relationship, and communications. Each category was comprised of three rating questions, using a Likert-type scale and open ended questions.

Conceptual Framework

The researcher uses a model as a tool to increase company performance. the tool itself is acquired from three level analysis organizational behavior and organization as an open system. After these two theories are reviewed researcher create a modified model. The researcher uses a model as a tool to increase company performance. the tool itself is acquired from three level analysis organizational behavior and organization as an open system. After these two theories are reviewed researcher create a modified model.

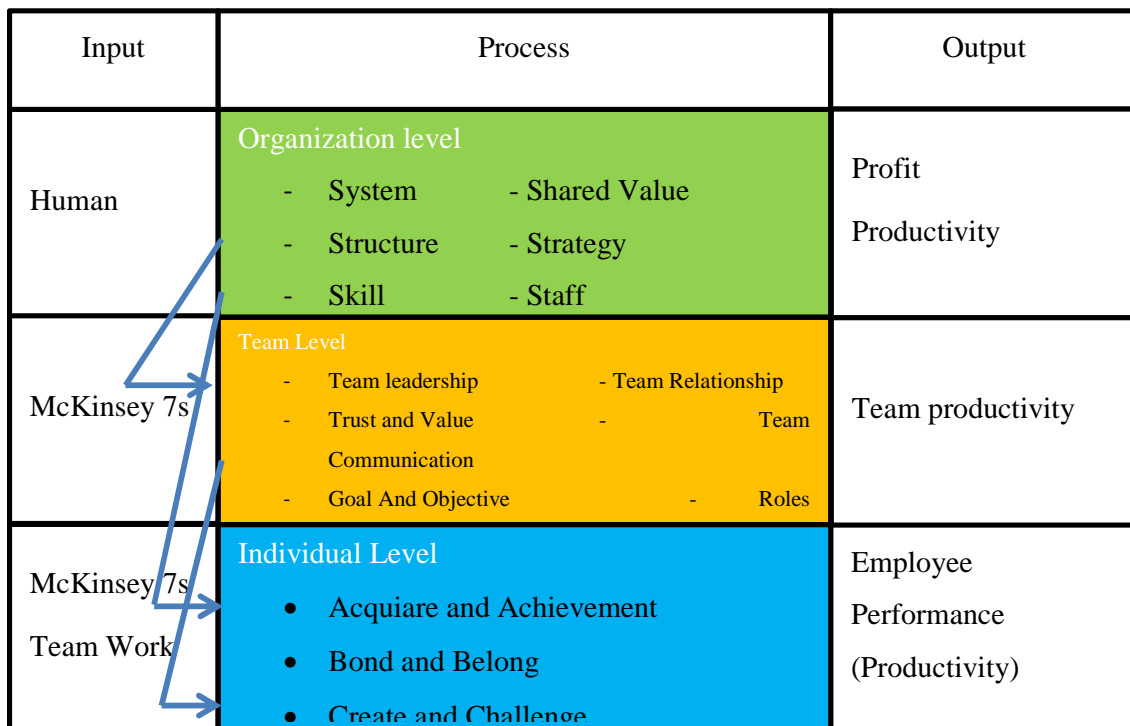| Input	Process	Output
Human	**Organization level** - System - Shared Value - Structure - Strategy - Skill - Staff	Profit Productivity
McKinsey 7s	**Team Level** - Team leadership - Team Relationship - Trust and Value - Team Communication - Goal And Objective - Roles	Team productivity
McKinsey 7s Team Work	**Individual Level** • Acquiare and Achievement • Bond and Belong • Create and Challenge	Employee Performance (Productivity)

Figure 2.6 Conceptual Framework

This model (Figure 2.6) is based on 3 level of Organizational Analysis as the input are human because PT. Bina Reka Cipta Utama is a service company, as the process are divided into 3 level; Organization level, Team Level, Individual Level

In organization level, there are seven variables that included in this level such as System, Structure, Skill, Style, Shared Value, Strategy, Staff this level will become the input of teamwork. In Team Level, based on the pilot study conducted by Nurhidayah in 2012, six factors were chosen as the most important in contributing to construction project team effectiveness, based on their ranking value. These team effectiveness factors Team Goals and Objectives, Team Leadership, Team Roles and Responsibilities, Team Relationship, Trust and Values, and Team Communication (Azmy, 2012). The team level will be used as an input for Individual level, a good team will create a good individual.

In Individual Level, this level is measured by using motivation model that presented by Paul R. Lawrence and Nitin Nohria. Variables such as acquire and achieve, bond and belonging, create and challenge, defend and define are used in order to measure individual motivation level. If the individual motivation is high, employees will help the company profit increase because *employee behavior can affect your firm's financial outcomes, especially in its impact on operations and customer service* (Patrick M. Wright, 2008). As the output is employee performance, from this conceptual data, the researcher expected that every level of the organization has its own impact to employee's performance and through multilinear analysis regression and descriptive analysis, researcher analyze the current condition of the company and calculate the most impactful factor to employee performance the company can see their strength and weakness and create a suitable 7s McKinsey Model Framework based on data analysis.

Research Flow
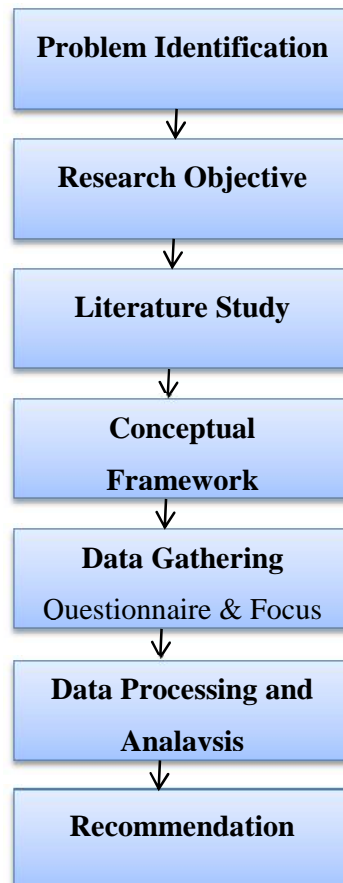
This chapter explains details of research method and design, statement of the problem, how the data set was collected, the nature of the population, and the development of survey tools. The research will conduct survey research that involve few steps: Problem Identification, Research Objective, Literature Study, Data Gathering, Data Processing and Analysis, Recommendation and Solution.

Problem Identification
In problem identification the researcher went to the company and observer for several days. Not only by observing, the researcher did an interview with all Board director, shareholder, and engineer.
Research Objective
Redesign organization using 7S McKinsey Framework Model to create an align Shared Values, System, Strategy, Structure, Skill, Staff, Style
Create a recommendation to increase organizational performance through HR Strategy by changing the current system to a system that increase employee motivation
Assessing and evaluate company engineers motivation
Literature Study
Researcher prepared literature review that needs for the purpose of this project such as motivation theory, organizational behavior, and redesign organization model.
Conceptual Framework
In this research, researcher collects data from the company to do the research, data can be collected from the questionnaire and financial documents.
Data Gathering
This study uses qualitative and quantitative analysis using multiple analysis models, namely, descriptive analysis. After factors that have the most impact on employee performance, it will be applied to create new 7S McKinsey. After all, data have been proceed the researcher will create an adjusted score to prioritize variables that need to be concerned by PT. Bina Rekacipta Utama using this formula

$$AS = \frac{Significance\ Level\ \times\ 100}{Criteria\ Score\ \times 100}$$

Data Processing and Analysis
This study uses qualitative and quantitative analysis using multiple analysis models, namely, descriptive analysis. Descriptive analysis is an analytical method that is used with the aim of obtaining descriptive deeply and objectively about the object of research (Sugiyono, 2014). In this research, descriptive analysis is used to develop an aligned 7S McKinsey Model Framework and as an evaluation material for the company itself and use it as an information. Data from the questionnaire will be analyzed using SPSS to see the significance of each factor
Recommencation
The output of this research is a recommendation and solution for the company in the form of aligned 7S McKinsey strategy. Analyze points are acquired from questionnaire as an input to suitable 7S McKinsey Model Framework.

Finding and Analysis

Table 4.1: Questionnaire Criteria of Scoring (Nurmawati, 2007)

No.	% Total Score	Criteria
1.	20,00 – 36,00	Bad
2.	36,01 – 52,00	Poorly
3.	52,01 – 68,00	Good enough
4.	68,01 – 84,00	Good
5.	84,01 – 100	Very good

3 level analysis of organization result After researcher analyze by using descriptive method, we can see the Organization Level (7s Mckinsey), Team Level (Team Effectiveness), Individual Level (Employees Motivation: 4-D Theory) on PT Bina Rekacipta Utama, , the results are:
Organization Level

Shared Value	76.90%	Good
System	60.50%	Good Enough
Strategy	62.00%	Good Enough
Structure	71.83%	Good
Skill	73.50%	Good
Staff	56.00%	Good Enough
Style	62.00%	Good Enough

From these list, the overall organizational criteria is good enough and the percentage is 65.36% .
Team Level

Team Leadership	79,50%	Good
Team Relationship	75.67%	Good
Team Communication	73.13%	Good
Trust and Value	78.71%	Good
Team Goals and Objective	75.33%	Good
Team Roles and Responsibility	76.78%	Good

From these list, the overall team level criteria is good and the percentage is 76.38% .
Individual Level

Drive to acquire	56.40%	Good Enough
Drive to bond	73.20%	Good
Drive to learn	70.90%	Good
Drive to defend	57.33%	Good Enough

From these list, the overall organizational criteria is good enough and the percentage is 65.36% . We can see that from these findings there are variables with high score and low score. From Appendix, each variable have their own significance level therefore, the researcher create a quadrant to separate variables that needs to be concerned and not concerned. PT. Bina Rekacipta Utama only needs to focus on variables with high significance and high correlation with employee performance.

Figure 4.1 Variables Quadrant
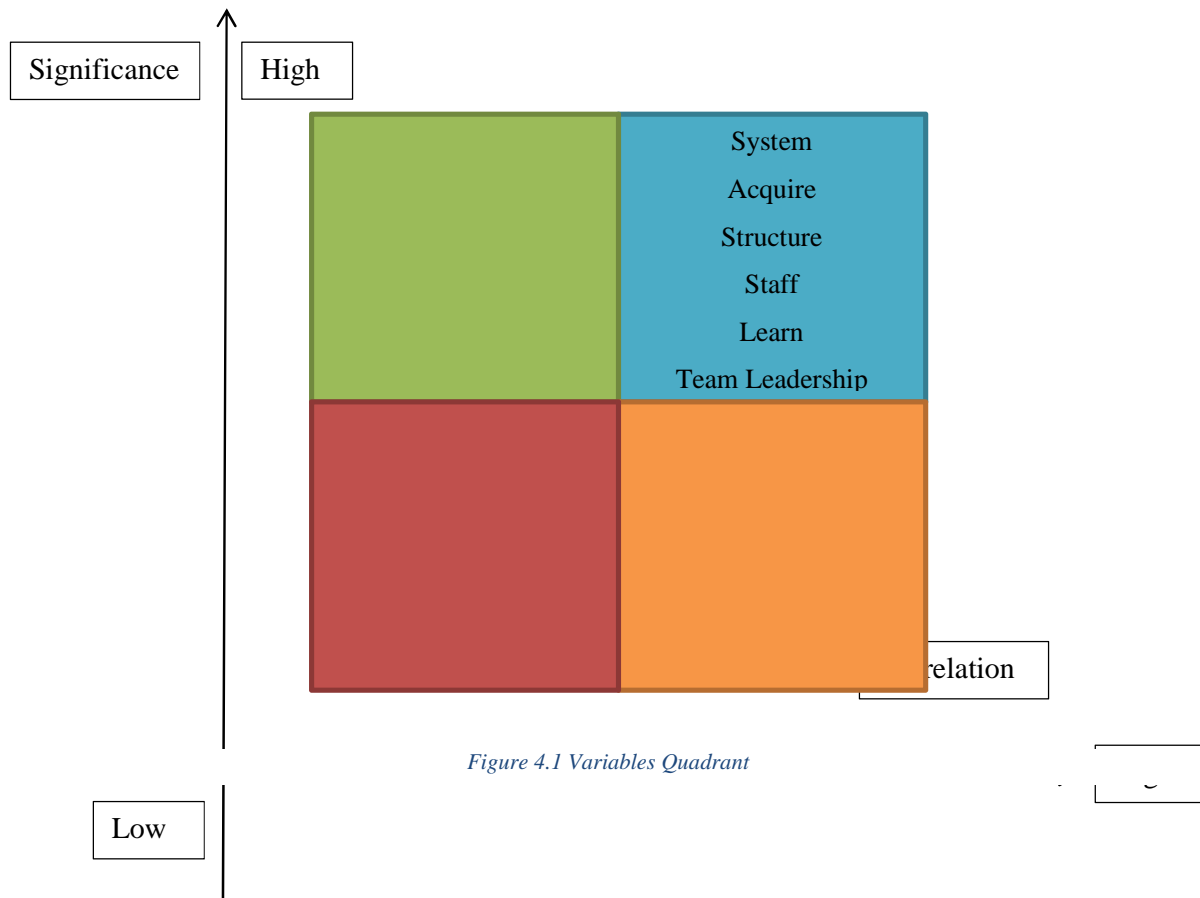
In the blue box are variables with High Significance and High Correlation. The rank are calculated from adjusted score (AS)

$$AS = \frac{Significance\ Level\ \times\ 100}{Criteria\ Score\ \times 100}$$

Table 4. 2 Adjusted Variables Score

No	Variables	Significance x 100	Criteria Score x 100	Adjusted Score
1	System	715	60,50	11,82
2	Acquire	626	56,40	11,10
3	Structure	653	71,83	9,09
4	Staff	444	56,00	7,93
5	Learn	523	70,90	7,38
6	Team Leadership	409	79,50	5,14

From table 4.2 above, the company is able to know the most important variables that needs to be concerned it shows that system affect employee performance the most and the criteria score are not too high as for Team Leadership it has lowest significance and highest criteria score.

Conclusion

How is the current employee motivation on PT. Bina Rekacipta Utama?
From findings of this research, PT. Bina Rekacipta Utama has "good enough" criteria on acquire drive and defend drive. It means that employee reward and achievement are not as worth compared to what they are doing and it may cause employee turnover because the drive to defend also does not satisfy enough. In team level, the result of the questionnaire are in good criteria, therefore, the company has to concern about its employee teamwork. In Organization level, there are 4 variables that in good enough criteria such as system, strategy, staff, style. Is the company current system support the employee motivation?

From findings, the acquire drive was low, it score was only 56,40% it was close to "poor" criteria. Drive to acquire also includes how well the company reward or pay all employees. If acquire score low, it also means reward or pay system are not satisfying enough.

What variables that needs to be concerned by the company?

Table 5.1 Adjusted Variables Score

No	Variables	Significance x 100	Criteria Score x 100	Adjusted Score
1	System	715	60,50	11,82
2	Acquire	626	56,40	11,10
3	Structure	653	71,83	9,09
4	Staff	444	56,00	7,93
5	Learn	523	70,90	7,38
6	Team Leadership	409	79,50	5,14

These are six variables that PT. Bina Rekacipta Utama needs to concern. These variables are needs to be concerned because it has the most significance correlation with employee performance. The importance of each variables were ranked using adjusted score formula.

Recommendation
For organization level, the researcher used 7S McKinsey model to design organization because it is the very basic model to create align strategy
Shared Value
In this section researcher obtain shared value through focus group discussion with Top managements. From the FGD there are 5 value that Top management and owner want to have it such as ; costumer focus, Integrity, Transparency, Effective and Efficient, Detail
System
Based From questionnaire PT. Bina Rekacipta Utama need to implement better reward system for the company to increase the score and standardize every daily activity.
Strategy
The strategy that currently use is Cost Efficiency
Structure
In order to support company cost efficiency strategy, the company must create a simple organization
Staff
Based on questionnaire staff at PT. Bina Rekacipta Utama feels need more employees to improve their employee performance so PT. Bina Rekacipta Utama should consider to increase its employees
Skill
For now PT. Bina Rekacipta Utama have enough skill such as Technical Skill and Soft Skill but the company must maintain its skill because it have significance correlation to employee performance

Style
Company need to use command and control leadership style to support Cost Efficiency strategy
After all elements in 7S McKinsey Model had been created the researcher can create complete 7S matrix to create integrated organization model.

Current Situation (Point A)

	Shared Values	Strategy	Structure	Systems	Style	Staff	Skills
Shared Values		-	-	-	-	-	-
Strategy	-		-	-	-	-	-
Structure	-	-		-	Democracy	-	experienced
Systems	-	-	-		-	-	-
Style	-	-	Democracy	-		-	Authority
Staff	-	-	-	-	-		-
Skills	-	-	experienced	-	Authority	-	

Future Situation (Point B)

	Shared Values	Strategy	Structure	Systems	Style	Staff	Skills
Shared Values		Cost Efficiency	Simplified	Transparancy	Intergrity	Effective	Costumer Focus
Strategy			Simplified	Standardized	Command Control	Efficiency	Competent
Structure				SOP	High Power	Effective	Obidient
Systems					Streak	R & P	Obidient
Style						Obidient	Experienced
Staff							Experienced
Skills						|	

Figure 5.1 7S McKinsey Matrix Current and Future Situation (Mind Tools Ltd., 2007 - 2011)

Cost Efficiency means that the company reduce their cost as much as they can while obtain profit as much as it can.
Simplified structure is simple structure to increase hierarchy efficiency
Transparency means that the company allowed employee to access all information they need except personal data such as salary
Effective means all employee in the company are recommended to do a job with better payment but do it with low effort
R & P (reward and punishment) means the company need to implement reward to boost employee performance and punishment system to control people behavior
Obedient means employees have less resistance to every change of company policy

Experienced means that employee needs to have many experience in same field of the company either technical skill or soft skill

High Power means that leaders have authority to control their employees

Streak means the company have less tolerance to every activity outside the standard operation procedures

Command and Control means the style of leadership that the leaders are streak and dominance to their employees

Reference

(n.d.). Retrieved from http://managementhelp.org/misc/orgs-open-systems.pdf

Arthur, J. B. (1992). The Link Between Business Strategy and Industrial Relations Systems in American Steel Minimills. *Industrial and Labor Relation Review*, 488-506.

Authenticity Consulting, LLC. (n.d.). *Field Guide To Consulting and Organizational Development*. Retrieved from http://managementhelp.org/misc/orgs-open-systems.pdf

Azmy, N. (2012). *The role of team effectiveness in construction project teams and project performance.* Ann Arbor.

Bertalanffy, L. V. (1969). *General System Theory.* New York: George Braziller.

Evolution and Revolution as Organizations Grow. (n.d.). *Harvard Business Review*.

Facer Jr., D. C., Galloway, F., Inoue, N., & Zigarmi, D. (2014). *Creation and Initial Validation of the Motivation Beliefs Inventory: Measuring Leaders' Beliefs about Employee Motivation Using Four Motivation Theories.* Toronto: Sciedu Press.

Fuller, J. B. (n.d.). *ORGANIZATIONAL BEHAVIOR*. Retrieved from Reference For Business: http://www.referenceforbusiness.com/management/Ob-Or/Organizational-Behavior.html#ixzz3wVQkm6Oe

Greiner, L. E. (1998, May-June). *Evolution and Revolution as Organizations Grow*. Retrieved 2015, from Harvard Business Review: https://hbr.org/1998/05/evolution-and-revolution-as-organizations-grow

Jurevicius, O. (2013, 12 20). *McKinsey 7s Model*. Retrieved 2015, from Strategic Management Insight: https://www.strategicmanagementinsight.com/tools/mckinsey-7s-model-framework.html

Kurt Nelson, P. (2014). 4-Drive Model: New Theory on Employee Motivation.

Mind Tools Ltd. (2007 - 2011). *Mckinsey 7s Matrix*. Retrieved from www.mindtools.com/rs/7S

Nurmawati, U. (2007). *Riset Manajemen Sumber Daya Manusia.* Bandung.

Patrick M. Wright, P. (2008). Human Resource Strategy. *SHRM Foundation's Effective Practice Guidelines Series*.

PT. Bina Rekacipta Utama. (2014). *About Us: PT. Bina Rekacipta Utama*. Retrieved 2015, from PT. Bina Rekacipta Utama: http://biru-eng.com/

Sugiyono. (2014). *Metode Penelitian Kombinasi (Mixed Method).* Bandung: Alfabeta.