

The Analysis of Performance using Malcolm Baldrige Approach at PT. ATS

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Abstract. Companies which are operating in oil and gas industries must improve their products and process quality to international level and standards, therefore, this also includes PT. ATS as the pressure vessels manufacturer company shall also comply with this requirement. This research was performed to align the company systems performance with the most reliable performance measurement tools and criteria which is provided by Malcolm Baldrige Criteria for Performance Excellence (MBCfPE). This criteria gives the company of how to measure their performances on the seven criteria of leadership, strategic planning, customer focus, measurement, analysis and knowledge management, workforce focus, operation focus and result. Therefore, from the Baldrige Assessment performed using descriptive research method, it was found that the company reached 515 points from 1000 points maximum set by the Baldrige and this brings the company to Baldrige criteria of 'Good Performance' and category of 'Average'.

1. Introduction

In the Industrial world, the competition is very tight, each company is competing with one another, therefore, only the best in producing their goods and services would be the preference of customers. The dimensions of quality are very important, since this is the key to leading companies to play an important role in the marketing environment and to penetrate their business into either local or overseas sales. The company performance would be the indicator whether the company can play an important part in producing demanding goods or services. From the performance people could measure the strength and weakness of the company and be able to improve the strength and overcome the weakness.

PT. ATS is a leading manufacturing company which produces pressure vessels for the oil and gas industry, PT. ATS has been certified to ISO 9001 and ASME Stamps certification. Since there are more similar companies producing the same product in the city of Cilegon. West Java. PT. ATS needs to improve their performance and for that PT. ATS needs to apply the performance measurement using Malcolm Baldrige Criteria for Performance Excellence (MBCfPE). MBCfPE is one of methods used to improve company performance thoroughly and continuously within the company. MBCfPE has seven criteria which are leadership, strategic planning, customer and market focus, measurement, analysis and knowledge management, workforce focus, process focus and business results (Baldrige Customer Service, 2016).

PT. ATS needs to transform their quality objective to become an organisation which can produce excellent performance. A leading manufacturer should understand and implement criteria for performance excellence and as the guidance for a company to implement excellent performance, the company can use Malcolm Baldrige Criteria for Performance Excellence (MBCfPE) and this MBCfPE has been adopted and implemented by some companies in Indonesia. The Agency which regulates this award is called Indonesia Quality Award (IQA), however, not many companies use this quality system (Faulkner, 2002), The main benefit of this study is that companies or institutions who want to participate in this award scheme can prepare themselves on how to implement MBCfPE in their operational systems to improve their performances. The companies or institutions can adopt the evaluation system and tailor it in accordance with their requirements and needs.

2. Literature Review

2.1. Performance Assessment and Measurement

According to Helfert (1996), company performance is the result of the continuous actions of management that are based on decisions made by individuals. Dennis L (2006) describes company performance because of a set of business processes at the cost of various resources. Kuhn T (1998) claimed that company performance assessment is a process or a system for assessing company performance based on standards. Helfert (1996) explains that performance assessment is a process of evaluating how good employees are in doing their job compared with standards. Therefore, performance assessment is performed to discover a performance achievement according to established standards. MBCfPE is one of the methods used to measure the performance, this performance measurement is using Baldrige criteria which also gives holistic pictures which show that some tools are needed to test all parts of the management system thoroughly (Gasperz and Fontana, 2011). Below are some explanations which is related to 7 categories of MBCfPE as per Baldrige Customer Service (2016) i.e.:

2.1.1. Leadership. Leadership teaches lots of managers or leaders how to help companies fail to survive. This category can also be classified as an organisation management system and how organisations fulfil their obligations and responsibilities and how the company becomes responsible legally and consider that the antique and responsibility roles are obtained, and responsibilities accomplished and meantime supporting their communication skills. This category is divided into 2 categories, i.e.: Senior Leadership, and Governance and Social Responsibilities.

2.1.2. Strategic Planning. The main strategic planning plays an important role in the development of the main objectives of the research. The development includes a working plan, implementation of the changes, and the progress measurement. This category is divided into two i.e., Strategy Development and Strategy Implementation.

2.1.3. Customer Focu. Customer focus shows us how organisations approach the customers to gain control on the markets in a long-term condition. This category also explains that organisations listen to the voice of customer, build customers' relationship, customers' engagement and use customers' inputs to perform improvement and identify process innovations.

2.1.4. Measurement, Analysis and Knowledge Management. The measurement, analysis and knowledge Management explains the company's ways to select, collect, analyse,

manage, and improve data, information, and knowledge assets. This category contained how the organisation learns and how organisations manage technological information. The category also tests how the organisation reviews findings to improve the performance. This category comprises: Measurement, analysis and improvement of organisation performance and Management of information, knowledge, and information technology.

2.1.5. *Workforce Focus.* Workforce focus explained how organisation gives access to needed capability and workforce or employee’s capabilities, and to develop working environment which can support organisation. This category also explained the relationship of managing people or employees to their full potential and aligning them with company mission, strategy, and plans. This category comprises workforce environment and workforce engagement.

2.1.6. *Operation Focus.* Operation focus tests how the organisation performs design, arrange and fix products and their working processes and to improve operational effectiveness to give values for customers and to achieve company sustainability and success. This category comprises working system and work process.

2.1.7. *Results.* Results serve as information which contains the performance results and company improvement in the main area, product and process results, results of customer’s focus, leadership, and management results. This category also explains information of the employees’ focus and financial and marketing results. Aside from that, this category also explains the level of performance compared to other competitors and organisations which offer the same products. This category comprises five items which are: product and process outcomes, customer-focused outcomes, workforce-focused outcomes, leadership and governance outcomes, and financial and market outcomes.

The Malcolm Baldrige criteria of excellence framework can be seen at the below picture (Figure 1)

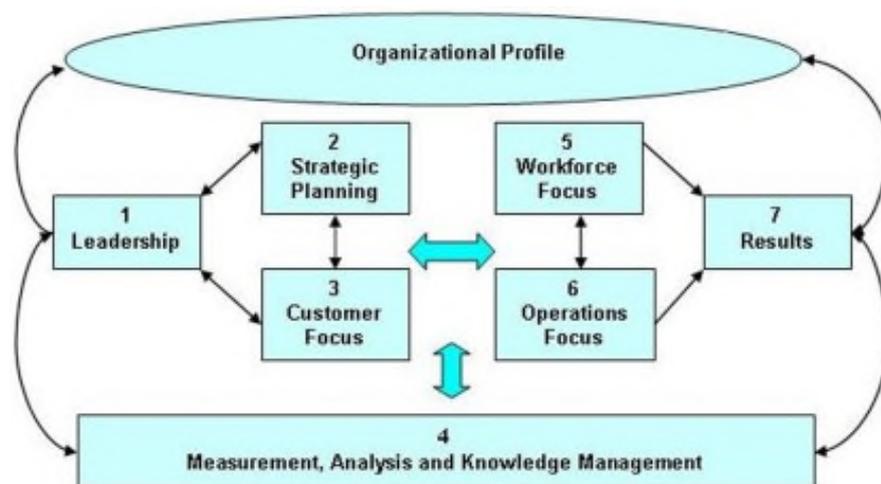


Figure 1. Malcolm Baldrige Criteria of Excellence Framework.
(Source: Borawski and Maryan, 2008)

2.2. MBNQA

Malcolm Baldrige Criteria for Performance Excellence is one of the methods used to improve organisation performance. The improvement is performed continuously and thoroughly throughout the organisation. The improvement is using measurement methods and collecting feedback on the organisation on the provision of quality products and services. Malcolm Baldrige National Quality Award (MBNQA) is one of the award schemes on quality performance in the USA. However, in this research we only discuss the assessment criteria which is used in this method, or it is known as Baldrige Assessment. The Baldrige Assessment is one of the tools to improve organisation performance. Performance (work accomplishment) is work result achieved. There are several measuring tools that can be used, including the Balance Score Card, System ISO 9001 Quality Management and Malcolm Baldrige National Quality Award (MBNQA). August W. Smith in (Priansa, 2014)) stated that: "Performance is output derives from process, human otherwise," Performance is the result of a human process. performance is an overview of the level of achievement implementation of a activities/programs/policies in realise the goals, objectives, mission and vision organisation contained in the formulation a strategic plan (strategic planning) organisation (Rahmawati et al., 2014) Based on this, the performance or work performance is the result that achieved by a person according to the measure valid, for a certain period of time, regarding work and behaviour and his actions (Simanjuntak and Budiastawa, 2017). Performance is the success of personnel, team, or organisational unit in realising strategic goals that have been set said that before with expected behaviour. Success achievement of strategic objectives needs to be measured. The strategic objectives on which to base performance measurement needs to be determined size and determined strategic initiatives to realise that goal. Target strategic and size later used to determine the target to be used as a basis for performance appraisal, to determine the award to be given personnel, teams, or organisational units. Mulyadi's opinion in Fathoni and Kesuma (2011) is basically almost same as what was done to by Malcolm Baldrige National Quality Award (MBNQA) which gives company award from all sectors every year. So, from some of the opinions above then it can be concluded that performance is a process overall good individual activities and groups whose results can be assessed both quantitatively and qualitative. Malcolm Baldrige's criteria are also used to solve the problem for knowing the value of the company's performance, the company's position in the market, advantages and the company's shortcomings and get competitive criteria and priority setting (Simanjuntak and Budiastawa, 2017). Temporary that, Malcolm Baldrige Criterion has also applied as a management tool quality in strategy formulation based on good company internal conditions and external (Purbosani, 2011). Application of the Malcolm Baldrige Criteria does not limit to business needs, but also enter the field of education (Kosim, 2012).

2.3. Baldrige Assessment

Malcolm Baldrige National Quality Award (MBNQA) is the appreciation and award for organisation's quality performance which is awarded by the US Government to corporations in the USA, and now is adopted by many countries including Indonesia. However, this research is discussing Baldrige Assessment which is one of the tools used to improve performance thoroughly and continuously. The Baldrige Assessment will give feedback on the quality performance of the organisations which can improve their products and services. Malcolm Baldrige Criteria for Performance Excellence or is short called Baldrige Criteria is composed of seven criteria as mentioned above. The criteria is also used to solve the problems, to understand the company's performance, marketing position, the company's strengths and weaknesses, to understand the company's competitive criteria and setting up priorities (Simanjuntak and Budiastawa, 2017). Meanwhile, Malcolm Baldrige criteria has been implemented as one of quality management tools when arranging strategy based on external or internal company conditions (Purbosani, 2011). The implementation of Malcolm Baldrige Criteria is not limited to business needs but also now includes education (Kosim, 2012).

There are seven categories which are used by Baldrige Assessment, below are the scores weighting of each category and item (Gaspersz, V. and Fontana, 2011):

Table 1. Seven categories which are used by Baldrige Assessment.

No	Criteria and Max. Score
	Leadership (120)
1	a. Senior Leadership (70) b. Governance and Responsibilities (50)
	Strategic Planning (85)
2	a. Strategy Development (40) b. Strategy Implementation (45)
	Customer Focus (85)
3	a. Voice of Customer (45) b. Customer Engagement (40)
	Measurement, Analysis, Knowledge Management (90)
4	a. Measurement, Analysis, and Improvement of Organisation Performance (45) b. Management of Information, Knowledge, and Information Technology (45)
	Workforce Focus (85)
5	a. Workforce Environment (40) b. Workforce Engagement (45)
	Operation Focus (85)
6	a. Work System (45) b. Work Process (40)
	Results (450)
	a. Product and Process Outcomes (120)
7	b. Customer-Focused Outcomes (90) c. Workforce-Focused Outcomes (80) d. Leadership and Governance Outcomes (80) e. Financial and Market Outcomes (80)

The total scores of Baldrige Assessment are 1000 points. Below is the detail ranking of total scores based on Baldrige Assessment. When the points are gathered or appraised from the company based on the research the total points will reveal which criteria and category that the company would belong to, the below table (Table 1) describes the division of Criteria and Category in accordance with Baldrige Assessment criteria:

Table 2. Organisation Criteria based on Baldrige Assessment.

Obtained Scores	Criteria	Category
873 – 1000	World Leader	Excellent
776 – 875	Benchmark Leader	Excellent
676 – 775	Industry Leader	Excellent
576 – 675	Emerging Industry Leader	Average
476 – 575	Good Performance	Average
376 – 475	Early Improvement	Average
276 – 375	Early Result	Poor
0 – 275	Early Development	Poor

Source: Flynn and Saladin (2001)

3. Research Method

This research is observational descriptive research due to not giving any treated sample and the research design is cross sectional because the research is done within one time, therefore, the condition pictured or described in this research only shows the real condition during the research period. The data obtained during the research are the characteristics of the employees of PT. ATS at Cilegon, in

accordance with their leadership roles, strategic planning, customer's focus, measurement, analysis and knowledge management, human resources focus, operational activities focus, and results criteria. Data which is used is from direct observations, interview, and literature review. The research also uses questionnaires to obtain information related to the conclusion of the research. Sample used are 200 workers from the company. Information related to performance is obtained by identifying Malcolm Baldrige criteria which are measured from the questionnaire respondents and the results are categorized.

Process of performance measurement using Malcolm Baldrige Criteria of performance at the PT. ATS, the steps are as follows:

- Initial survey performed on the research object performance namely company PT. ATS, the survey is aimed to align the between the Malcolm Baldrige criteria with company performance measurement, therefore, scoring measurement can be obtained.
- Composing the questionnaire for Baldrige Assessment. The questionnaire will be made as per items from Malcolm Baldrige criteria.
- Distribution of questionnaires to the respondents i.e., the company workers or employees. Interviews are also done on the company managers to get inputs on the specific issues such as leaderships, customer focus and results.
- Processing the data and collected questionnaires and giving scores in accordance with Malcolm Baldrige criteria measurement. Measurement and appraisal are made based on Malcolm Baldrige Assessment scores weighting above.
- Comparing the maximum scores as per Baldrige Assessment with actual scoring from the respondents' questionnaires and transform them into percentage figures.

4. Results and Discussion

PT. ATS was established in year 2015 has been playing an important role in the supporting oil and gas industry and has provided quality products and services to their customers and from the accumulating points as processed from the questionnaire and observations and compared with the Malcolm Baldrige Assessment criteria, we can see in the Table 2 below the results.

Table 3. PT. ATS Performance Scoring Based on Malcolm Baldrige Assessment Criteria.

No	Criteria	Malcolm Baldrige Scoring	
		Max. Scores	Actual Scores
1	Leadership	120	81
	1.1 Senior Leadership	70	45.55
	1.2 Governance and Social Responsibility	50	35.45
2	Strategic Planning	85	45
	2.1 Strategy Development	40	20.65
	2.2 Strategy Implementation	45	24.35
3	Customer Focus	85	46
	3.1 Voice of the Customer	45	25
	3.2 Customer Engagement	40	21
4	Measurement, Analysis, and Knowledge Management	90	43
	4.1 Measurement, Analysis, and Improvement of Organisation Performance	45	20.75
	4.2 Management of Information, Knowledge, and Information Technology.	45	22.25
5	Workforce Focus	85	43
	5.1 Workforce Environment	45	20.85
	5.2 Workforce Engagement	40	22.15
6	Operation Focus	85	29
	6.1 Work System	45	16.80
	6.2 Work Process	40	12.20
7	Result	450	228
	7.1 Product and Process Outcomes	120	50.15
	7.2 Customer-Focused Outcomes	90	45.20
	7.3 Workforce-Focused Outcomes	80	40.25
	7.4 Leadership and Governance Outcomes	80	42.00
	7.5 Financial and Market Outcomes	80	50.40
Total		1000	515

From the Table 2 above, we can conclude that the Baldrige Assessment criteria of PT. ATS is 515 points, which brings the company into criteria of 'Good Performance' and category of 'Average', however, we also need to investigate how far the company has achieved to each criteria, therefore, we can convert the results into percentage description or status as per Table 3 below:

Table 4. PT. ATS Percentage Malcolm Baldrige Assessment.

No	Criteria	Max. Score	Actual Score	%
1	Leadership	120	81	67.50%
2	Strategic Planning	85	45	52.94%
3	Customer Focus	85	46	54.12%
4	Measurement, Analysis, and Knowledge Management	90	43	47.78%
5	Workforce Focus	85	43	50.59%
6	Operation Focus	85	29	34.12%
7	Result	450	228	50.67%
Total		1000	515	51.50%

5. Conclusion and Recommendation

From the whole and thorough calculation as detailed in Table 2 and Table 3 above that the company systems show that the overall percentage is about 51.50% which equals with 515 points, or criteria of 'Good Performance' and category 'Average'. However, to improve this, lots of things need to be performed and to leverage each Baldrige criteria up to more than 60%. The highest achievement was obtained by criteria of Leadership and the lowest criteria falls on the Operation Focus. The weakest part which is operation focus needs to be immediately looked at and improved and those criteria which are under 50% need also to be improved.

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