Objective identification from every success factors or clause of the integration process management system to increase the performance efficiency of state-owned construction services organization in Indonesia

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Abstract: State-Owned Construction Services Organization in Indonesia basically aims to improve the welfare and prosperity of the people. The background of the establishment of the State-Owned Company can be carried out with good performance from within the State-Owned Company body itself. So that State-Owned Company can realize their goals and become the driving force of the national economy in Indonesia to be able to improve the welfare and prosperity of the people. A State-Owned Companies is declared successful if it can increase people's prosperity which begins by improving the performance of the company. From the explanation above, a state-owned company is able to increase people's prosperity by increasing the performance of its company by identifying the goals and objectives of each success factor or the High Level Structure clauses in the Integration Process Management System, then evaluating the company's performance through the outputs which are the objectives. This research method was carried out by means of interview surveys to experts, respondents and also literature study. The integration of management systems is ultimately seen as a very effective tool in optimizing the functions of the quality, safety, health, and environmental management system procedures in carrying out construction projects by a construction service organization. Based on the results of this study, it was found that the most influential objective for the efficiency of organizational performance came from the leadership clause.

Keywords: Integration Process, High-Level Structure, System Management, Improvement Evaluation, Indonesian State-Owned Enterprises, Quality Management System, Safety Management System, Environmental Management System, Management System Standard

1. Introduction
State-Owned Enterprises (BUMN) were born as a form of implementation of the state's obligation to provide welfare to the people. Building a strong economic structure, through sound and ethical business is one way to achieve prosperity. It is not possible for the state to directly carry out business activities. Therefore, BUMN is the right choice for the state to provide welfare to its people. The existence of BUMN in Indonesia started from the nationalization of Dutch companies which were
supposed to improve the Indonesian economy which was currently experiencing a downturn. For this reason, in the 1945 Constitution, BUMN were considered as one of the national economic actors. Since that time the nationalization ended the dominance of the Dutch economy and at the same time became the starting point for the formation of Indonesian BUMN. Basically, the general objective of establishing a BUMN is to improve the welfare and prosperity of the people. The background of the establishment of the BUMN can be accomplished with a good performance from within the BUMN so that the BUMN can realize its goals and can be the driving force of the national economy in Indonesia. To be able to improve the welfare and prosperity of the people in accordance with the original purpose of the establishment of BUMN, an BUMN is declared successful if it can increase the prosperity of the people by increasing company performance. One of the focuses for improving the BUMN (state-owned company) performance is integrating the management system in its business operation. This paper views this matter for the cases of BUMN Karya Construction Services in Indonesia, where these companies have essential roles in providing infrastructure development in Indonesia [4].

Therefore, this study has two main objectives as follows:

1. Identify clauses in the process integration system that are relevant to improve the efficiency of the performance of BUMN Karya construction services in Indonesia
2. Identify the targets of each success factor/clause in the integration of the management system process to improve the efficiency of the performance of the construction service company BUMN in Indonesia

2. Theoretical Views
Process integration has been developing for more than four decades, especially in the environmental and manufacturing industries with the development of concepts from unification, standardization towards a synergy model [7]. Process integration is a holistic approach to design and operate that emphasizes the oneness of the process [9]. Process integration is a concept / methodology for combining several parts of a process or entire process to reduce the consumption of resources or harmful emissions to the environment [7]. The integration process refers to a harmonious relationship between parts/components of processes in the system [2] [3] [5]. Process integration is a system oriented method and integrated approach to the complex industrial design process [6]. Process integration is the process of adapting and studying a system [8]. The concept of performance can be defined as an achievement of results or degree of accomplishment [1]. This means that, the performance of an organization can be seen from the degree to which the organization can achieve goals. Remembering that purpose an organization is to achieve certain goals that have been set previously, then the information about organizational performance is a very important thing. Information about organizational performance can be used to evaluate whether the work process carried out by the organization has been in line with the expected goals or not. However, in reality, there are many organizations that do not have information about their performance.

3. Research Methods
This study uses the Delphi method to analyze the data obtained, and conducted a survey using a questionnaire instrument and interviews with experts who have experience in integration management system. The purpose of this research strategy is to identify the success factors/clauses in the integration process management system that is integrated to the implementation of quality system management and safety management in improving the performance efficiency of BUMN Construction Services in Indonesia. The following is the research process carried out by researcher.
3.1 Phase I Data Collection and Analysis

In this study, for the first stage of data collection content and content validation there were 5 experts. 1 expert is a Management System Manager of a state-owned construction company, 1 other is a representative manager of a construction company, and 1 other person is an SMK3L audience, and the last 2 people are auditors of the Quality Management System (QMS). In the Phase I Data Analysis, the results showed that on average the experts agreed on the variables which were given as many as 120 variables X and 4 Y variables with some notes that had been summarized, analyzed, corrected, and added to each of these variables.

Table 1. Phase 1 Questioner

| X | Latent Variables Objectives of each Process Integration Clause |
|---|---------------------------------------------------------------|
| X1 | **Scope Clause**: Integration of three management system elements namely SMM, SMK3, and SML implies the integration of three elements of performance improvement because quality reflects economic sustainability, occupational safety and health describes social sustainability, and the environment represents environmental protection |
| X1.1 | Determine stakeholders based on the scope of the business process undertaken, which is relevant to quality, health, work safety and the environment |

|   | Expert 1 | Expert 2 | Expert 3 | Expert 4 | Expert 5 | Conclusion |
|---|----------|----------|----------|----------|----------|------------|
| X1.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

3.2 Phase II Data Collection and Analysis

Phase II data collection aims to identify the indicators of the dependent variable Y namely the efficiency of organizational performance. From this collection, indicators can be seen that is reflected to the efficiency of the organization's performance. Phase II data collection is carried out with a literature study then distributing questionnaires to experts who are the same as data gathering stage I.
In the next analysis is data analysis phase II is the validation of the results by experts regarding variable Y. Data analysis phase II can be seen in the table below

**Table 2. Phase 2 Questionnaire**

| Y | Indicator dependent variable Y |
|---|-------------------------------|
| Y1. Maximizing the use of resources: Maximizing the use of human resources in the organization to increase profits or reduce losses from each unit factor in the use of resources by making competency requirements and the provisioning and training plan. | ✔ ✔ ✔ ✔ ✔ |
| Y2. Degree of suitability of the process: The degree of suitability of the process in the organization produces output using cost and time efficiency by making a detailed SOP | ✔ ✔ ✔ ✔ ✔ |

### 3.3 Phase III Data Collection and Analysis

At the Pilot Survey stage, this research has combined the pilot survey questionnaire and the previous expert validation questionnaire. The point is that in the content validation questionnaire and extracted by experts, there have been questions about whether the target variable is easy to understand or not. Then at that stage also has received input, suggestions, and improvements from experts so that the sentences that will later be submitted to respondents are easier to understand.

### 3.4 Phase IV Data Collection and Analysis

At this stage, data collection was carried out related to the assessment of target identification clauses assessed by respondents. At this stage, 40 respondents were experienced in their fields and were employees of BUMN Karya construction companies in Indonesia. From each target clause contained in a questionnaire document, these respondents will provide an assessment of how much influence this goal on improving the efficiency of the performance of BUMN Karya organizations in Indonesia by providing a Likert rating scale, namely the 1-5 rating scale. Where 1 is not influential and 5 is very influential.

**Table 3. The 4th Data Analysis Validity Test**

| Item | Item-Total Statistics | Annotation |
|------|-----------------------|------------|
|      | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item Total Correlation | Cronbach's Alpha if Item Deleted |          |
| x1.1 | 538,600               | 1141,682    | .366                    | .929                      | Valid    |
| x1.2 | 539,050               | 1120,510    | .663                    | .927                      | Valid    |
| x1.3 | 538,650               | 1143,772    | .350                    | .929                      | Valid    |
| x1.4 | 538,575               | 1108,353    | .605                    | .927                      | Valid    |
| x1.5 | 538,250               | 1114,705    | .535                    | .927                      | Valid    |

Validity test aims to test the accuracy of an instrument used in this study. This test uses SPSS v.22 software as a tool by using the corrected item total correlation value from the R table value. In this study used the R table value for 2-sided test at a level of confidence of 95% or significance of 5% with
the number of respondents (N) 40 people. With the number of respondents the degree of freedom or
degree of freedom (df) = N - 2 = 40 - 2 = 38. Based on the degree of freedom (df) of 33 and the
significance value of 0.05, the R value of the two-sided table used is 0.3338.
The following are the basis for decision making in assessing the validity of research variables,
including:
• If the corrected item total correlation > R table, then the variable is valid.

**Table 4.** 4th Data Analysis, Reliability Test. Based on the results of the reliability test, the cronbach's alpha value was 0.928 with a total of 125 variables. It can be concluded that the research instrument used is reliable because the value of Cronbach's alpha is greater than the value of the critical product moment R (0.6).

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.928            | 125        |

**Table 5.** 4th Data Analysis Correlation Test with Pearson Method

| Correlations | Clause’s Objective | Organization Performance Efficiency |
|--------------|--------------------|------------------------------------|
| Pearson Correlation | 1                  | 0.669**                            |
| Sig. (2-tailed)  | .000               |                                    |
| N              | 40                 | 40                                 |

**. Correlation is significant at the 0.01 level (2-tailed).

From the test results above, we can find out whether the goals of the process integration clause have a correlation or an influence relationship on the efficiency of organizational performance and also can find out how strong the correlation or influence relationship is. Judging from the results table, the tailed Sig2 value <0.05, then correlated. From the results above it can be seen that the significance value is 0.000 so that it can be said that there is a correlation between the target process integration clause on the efficiency of organizational performance. Then when looking at the Pearson Correlation value, the value is 0.669 out of the total sample of 40 respondents. Based on these values, it can be said that the degree of relationship between the target clause and performance efficiency is a strong correlation.

**Table 6.** 4th Data Analysis, Qualitative Data Test (Integration Clauses)

| Clauses of Process Integration | Total Average Value | Percentage (%) | Ranking |
|-------------------------------|---------------------|----------------|---------|
| X2= Leadership Clause         | 187,62              | 13,56          | 1       |
| X5= Process Support Clause    | 178,46              | 12,90          | 2       |
| X8= Improvement Clause        | 175,17              | 12,66          | 3       |
| X6= Operational Clause        | 171,25              | 12,38          | 4       |
4. Research Result
After reviewing and analyzing the data obtained, the Process Integration clause was analyzed and the new findings were obtained regarding the order or ranking of the process integration clauses that affect the increased efficiency of the performance of BUMN Karya organizations in Indonesia. The sequence of the clauses is as follows:

- Leadership clauses are highest among other clauses and are considered to have a major influence on the efficiency of organizational performance. The Leadership Clause is considered very influential because it is seen from a number of questions and statements as well as assessments in the questionnaire involving top management that perform as an important role in the efficiency of the performance of BUMN Karya organizations in Indonesia.
- Process Support Clause is in the second place with a total average value of 178.46
- The Increase Clause is ranked third with an average value of 175.15
- Operational Clause in the fourth with an average value of 171.25
- Scope clause in fifth place with an average value of 170.75
- The Performance Evaluation Clause on the sixth with a total average score is 170.13
- Policy Clause with a total of 165.59
- Planning Clause with an average value of 164.29

Findings on the Process Integration Clause Objectives that most influence the performance efficiency of BUMN Karya organizations in Indonesia. The table below is a sequence or ranking of the targets of the process integration clause seen from the dominant clause that most influences the efficiency of the performance of BUMN Karya in Indonesia.

Table 7. 4th Data Analysis, Qualitative Data Test (Organization’s Performance Indicators)

| Indicator | Score | Rank |
|-----------|-------|------|
| Y5        | 184   | 1    |
| Y1        | 183   | 2    |
| Y4        | 182   | 3    |
| Y3        | 181   | 4    |
| Y2        | 178   | 5    |
### Tabel 8. Research Results, Qualitative Data Test (Objectives of Integration Process Management System)

| Class | Score | Back | Class | Score | Back | Class | Score | Back | Class | Score | Back | Class | Score | Back | Class | Score | Back |
|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| 1.5   | 101   | 1    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.3   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |
| 1.2   | 101   | 2    | 2.1   | 197   | 1    | 3.5   | 181   | 1    | 4.6   | 209   | 1    | 5.1   | 183   | 1    | 6.5   | 195   | 1    |

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Note: The table continues with similar structure, showing scores and back-related values for different classes.
Table 9. Result of Research, The Indicator of State-Owned Company’s Performance Efficiency

| No | Variabel | Organization Performance Efficiency Indicators |
|----|----------|-----------------------------------------------|
| 1  | Y5       | Establishing scope covers all activities, products or services in the control of the organization or influence that can have an impact on performance |
| 2  | Y1       | **Maximizing the use of resources**: Maximizing the use of human resources in the organization with the aim of increasing profits or reducing the losses of each unit factor in the use of resources by making competency requirements as well as training and training plans. |
| 3  | Y4       | **Construction service organization targets achieved**: Achievement of construction service organization targets by minimizing production costs by making a schedule or engineering calculations for the use of materials / materials but not reducing aspects of product quality |
| 4  | Y3       | **The level of productivity which also indicates effectiveness**: The level of productivity which also measures the effectiveness of the service or referred to as the ratio between input and output |
| 5  | Y2       | **Degree of suitability of the process**: The degree of suitability of the process in the organization produces output using cost and time efficiency by making detailed SOPs |

Findings on efficiency indicators of organizational performance is a new invention where the variables are additional variables of experts that Y5 actually had the highest scores on the efficiency indicator reflects the performance of BUMN’s work in Indonesia. This finding is also based on analysis and evaluation as well as testing from the sample data that have been distributed and filled out by these respondents.

Table 10. Result of Research, The Most Influential Objective from Every Process Integration Clause

| No | Variabel | Most Influential Objective | Clause |
|----|----------|----------------------------|--------|
| 1  | x2.7     | Define the role of top management in ensuring that integrated systems report system performance and opportunity for improvement | Leadership |
| 2  | x5.6     | Determine, provide and maintain infrastructure for the operation of the process. | Support |
| 3  | x8.5     | Guarantee the results of the management review identifying decisions and actions that are relevant to changes in OHS performance, policies and objectives. | Improvement |
| 4  | x6.15    | Ensure contingency plans exist for emergencies, including arrangements for evacuating locations related to emergency services and start up after emergencies. | Operational |
| 5  | x1.5     | Define the scope of the system by considering external and internal problems, interested parties and the organization's | Scope |
Include monitoring and evaluation results in management review.

Ensuring that the goals set at the department and individual level are relevant to the business.

Establish a change plan for the QMS including the objectives of its change and the consequences, the integrity of the system, the availability of resources, the allocation and reallocation of responsibilities and authority.

5. Conclusion
The conclusions of this study based on the objectives of this study include:

- Clauses that have been identified as clauses that affect the efficiency of organizational performance include the Scope Clause, Leadership Clause, Policy Clause, Planning Clause, Process Supporting Clause, Operational Clause, Performance Evaluation Clause, and Improvement Clause validated by experts as a number of reference clauses that affect the efficiency of the performance of BUMN Karya organizations in Indonesia.

- Leadership Clause is the most influential clause and has a dominant assessment on the efficiency of the performance of BUMN Karya in Indonesia, this is in accordance with the definition of the leadership clause which states that leaders at all levels establish a unity of purpose and direction and create conditions in where people are involved in achieving organizational goals and create unity of purpose, direction and involvement of people in organization to align strategy, policies, processes and resources to achieve its goals.

The targets that most influence the efficiency of organizational performance can be seen from the dominant assessment of the main clause. The target that has a high evaluation and most influences the efficiency of organizational performance is in the leadership clause, which is to determine the role of top management in ensuring that the integrated system reports on system performance and opportunities for improvement. The indicator that best reflects the efficiency of an organization's performance is if there is an activity that sets the scope to cover all activities, products or services in the control of the organization or influence that can have an impact on performance.

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